XR-4750RDS/C450RDS

SERVICE MANUAL

AEP Model
UK Model

Ver 1.1 2001.06

Photo: XR-C450RDS

For RM-X2S (Remote Commander), please refer to RM-X2S/X3S Service Manual (9-960-039-□□) previously issued.

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MG-25B-136

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	61 dB (TYPEII, IV) 58 dB (TYPEI)

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 70 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	4 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

General

Outputs	Telephone mute control lead Power amplifier control lead (XR-C450RDS only) Rear line out (1) (XR-C450RDS only)
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 181 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 164 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Rotary commander RM-X2S Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

9-925-542-12
2001F0500-1

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Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

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SERVICING NOTES

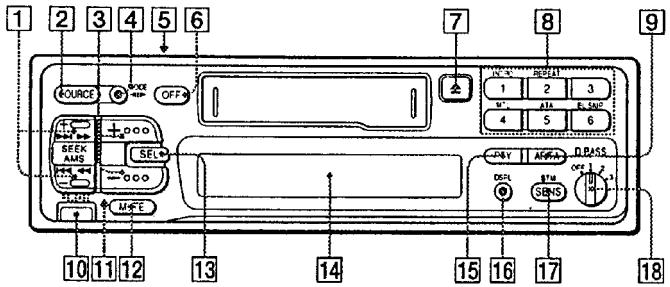
Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering .

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Location of controls (XR-4750RDS)



Refer to the pages for further details.

1 SEEK/AMS button 4, 5, 6, 7, 8, 10

2 SOURCE button (TAPE/TUNER) 4, 6

3 ⊕⊖ (volume/bass/treble/balance/fader control) button 4, 12

4 MODE (◀I▶) button
During Tuner reception:
BAND select 6

During Tape playback:
Transport direction change 4

5 POWER SELECT switch (located on the top of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

6 OFF button 3, 4

7 ≙ (eject) button 4

8 During radio reception:
Preset number buttons 6

During tape playback:
① INTRO button 5
② REPEAT button 5
④ MTL button 5
⑤ ATA (Automatic Tuner Activation) button 5
⑥ BL.SKIP (Blank Skip) button 5

9 AF/TA (alternative frequency/traffic announcement) button 8, 9

10 RELEASE (front panel release) button 3, 14

11 Reset button (located on the front side of the unit hidden by the front panel) 3
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function properly.

12 MUTE button 12

13 SEL (control mode select) button 4, 9, 10, 12

14 Display window

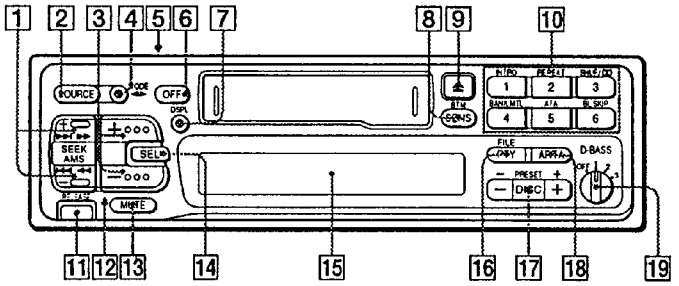
15 PTY (programme type) button 10

16 DSPL (display mode change/time set) button 4, 5, 7

17 SENS/BTM (sensitivity adjust/Best memory function) button 6, 7, 9

18 D-BASS control 12

Location of controls (XR-C450RDS)



Refer to the pages for further details.

1 SEEK/AMS button 5, 6, 7, 8, 9, 11, 14, 15, 17

2 SOURCE button (TAPE/TUNER/CD/MD) 5, 7, 14, 16

3 ⊕⊖ (volume/bass/treble/balance/fader control) button 5, 13, 16

4 MODE (◀I▶) button
During Tuner reception:
BAND select 7

During Tape playback:
Transport direction change 5

During CD/MD playback:
Changer select 14

5 POWER SELECT switch (located on the top of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

6 OFF button 4, 5

7 DSPL (display mode change/time set) button 5, 6, 8, 14, 16

8 SENS/BTM (sensitivity adjust/Best tuning memory function) button 7, 8, 10

9 ≙ (eject) button 5

10 During radio reception:
Preset number buttons 7

During tape/CD/MD playback:
① INTRO button 6, 15
② REPEAT button 6, 15
③ SHUF (Shuffle) button 15
④ MTL button 6
⑤ ATA (Automatic Tuner Activation) button 6
⑥ BL.SKIP (Blank Skip) button 6

11 RELEASE (front panel release) button 4, 18

12 Reset button (located on the front side of the unit hidden by the front panel)
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function properly.

13 MUTE button 13

14 SEL (control mode select) button 5, 10, 11, 13, 14, 16, 17

15 Display window

16 PTY (programme type) button 11

17 PRESET/DISC button 7, 15
During Tuner reception:
Preset stations select 7

During CD/MD playback:
Disc change 15

18 AF/TA (alternative frequency/traffic announcement) button 9, 10

19 D-BASS control 13

The illustration of the front panel in this manual is of the XR-C550RDS.

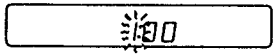
This section is extracted from instruction manual.

Setting the clock

The clock has a 24-hour digital indication.
For example, setting it to 10:08

1 Press (OFF) or (DSPL) during operation.

2 Press (DSPL) for two seconds.



The hour digit blinks.

❶ Set the hour digits.

to go forward

to go backward

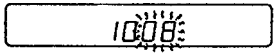
❷ Press (SEL) momentarily.

The minute digit blinks.

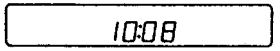
❸ Set the minute digits.

to go forward

to go backward



3 Press (DSPL) momentarily.



The clock activates.

Note

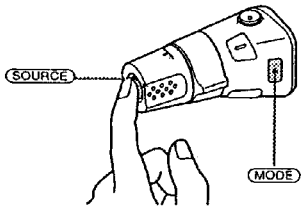
If the POWER SELECT switch on the top of the unit is set to the ❽ position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio.

Other Functions

Using the rotary remote

The rotary remote works by pressing buttons and/or rotating controls.
You can control the optional CD/MD changer by the rotary remote.

By pressing buttons (the SOURCE and the MODE buttons)



Every time you press (SOURCE), the source changes as follows:

TAPE → TUNER → CD/MD

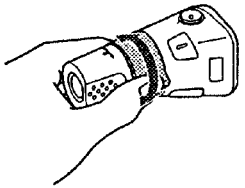
Pressing (MODE) changes the operation in the following ways:

- *the tape transport.*
- *the band, FM1 → FM2 → FM3 → MW → LW.*
- *the CD/MD changer.*

Tip

You can turn on this unit by pressing (SOURCE) on the rotary remote.

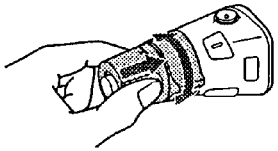
By rotating the control (the SEEK/AMS control)



Rotate the control momentarily and release it to:

- Locate the beginnings of the tracks on the tape. Rotate and hold the control, and release it to fast-wind the tape. To playback, rotate and hold the control again, and release it.
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in the stations automatically. Rotate and hold the control to tune in the specific station.

By rotating the control while pushing in (the PRESET/DISC control)

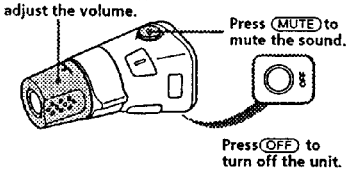


Push in and rotate the control to:

- Receive the stations memorized on the preset buttons.
- Change the disc.

Other operations

Rotate the VOL control to adjust the volume.



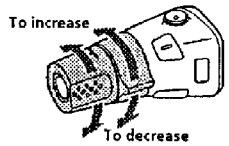
NOTE:

CD/MD changer functions: XR-C450RDS only

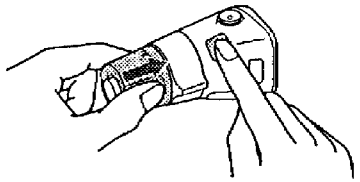
EN

Changing the operative direction

The operative direction of controls is factory preset as in the illustration below.



If you need to mount the rotary remote on the right side of the steering column, you can reverse the controls operative direction.



Press (SEL) for two seconds while pushing in the VOL control.

Adjusting the sound characteristics

1 Select the item you want to adjust by pressing (SEL) repeatedly.
VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader)

2 Adjust the selected item by pressing either ⊕ or ⊖.

Adjust within three seconds after selecting. (After three seconds the button will again serve as the volume control button.)

Muting the sound

Press (MUTE).
The "MUTE" indication flashes.

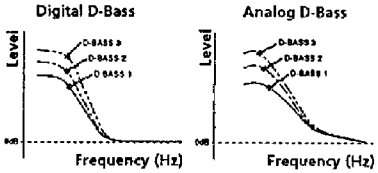
To restore the previous volume level, press again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone-mute function).

Changing the sound and beep tone

Boosting the bass sound — D-bass

You can enjoy clear and powerful bass sound. The D-bass function boosts the low frequency signal with a sharper curve than conventional bass boost.
You can hear the bass line more clearly even if the vocal sound is the same volume. You can emphasize and adjust the bass sound easily with the D-BASS control. This effect is similar to the one you get when you use an optional subwoofer system.
Moreover, the Digital D-bass* function creates even sharper and more powerful bass sound than Analog D-bass.



Adjusting the bass curve

Turn the D-BASS control to adjust the bass level (1, 2 or 3).
"D-BASS"* appears in the display.

To cancel, turn the control to the OFF position.

** If the CD changer has the digital D-bass function, "DIGITAL D-BASS" appears on the display during CD playback.*

NOTE:
CD/MD changer functions:
XR-C450RDS only

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so that the unit will not hamper the driver during driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

Before detaching the front panel, be sure to press the OFF button first. Then press the RELEASE button to open up the front panel, and detach the panel by pulling it towards you as illustrated.

To attach

Align parts Ⓐ and Ⓑ, and push the front panel in until it clicks.

Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

Para extraerlo

Antes de extraer el panel frontal, cerciórese de presionar la tecla OFF. Después presione la tecla RELEASE para abrir el panel frontal, y extraiga éste tirando de él hacia usted como se muestra en la ilustración.

Para instalarlo

Alinee las partes Ⓐ y Ⓑ, y presione el panel frontal hasta que chasquee.

Montering

Sökerhetsföreskrifter

- Låt de fyra hålen på bilstereons ovansida vara. De är till för radiojusteringar som endast får utföras av fackkunniga tekniker.
- Var nog när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

Ta loss frontpanelen

Tryck på OFF för att slå av strömmen innan du tar loss frontpanelen. Tryck därefter på RELEASE för att öppna frontpanelen. Ta loss frontpanelen genom att dra den utåt enligt illustrationen nedan:

Fästa frontpanelen

Lägg Ⓐ och Ⓑ mot varandra, kant i kant, och tryck tills du hör ett klickljud.

Instalação

Precauções

- Não altere indevidamente os quatro orifícios da superfície da parte superior do aparelho. Estes servem para regulações do sintonizador que devem ser efectuadas somente por técnicos qualificados.
- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, tais como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o montagem fornecido .

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.

Para retirar e colocar o painel frontal

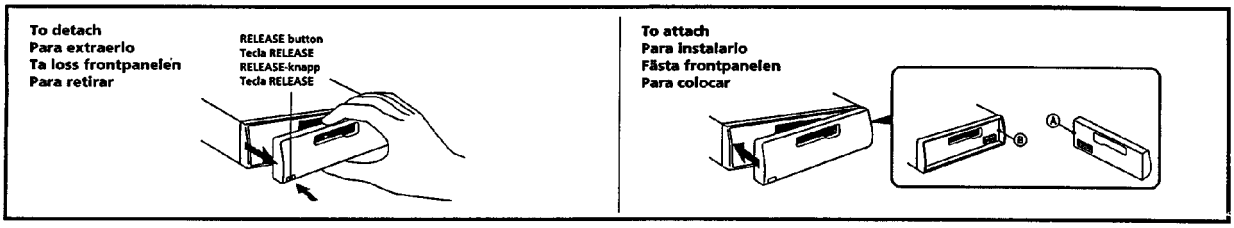
Retire o painel frontal antes de iniciar a instalação do aparelho.

Para retirar

Antes de retirar o painel frontal, carregue na tecla OFF. A seguir, carregue na tecla RELEASE para abrir o painel frontal e retire-o, puxando-o para fora como ilustrado.

Para colocar

Alinhe as partes Ⓐ e Ⓑ, e fixe o painel frontal pressionando-o até que encaixe.



Mounting Example

Installation in the dashboard

Ejemplo de montaje

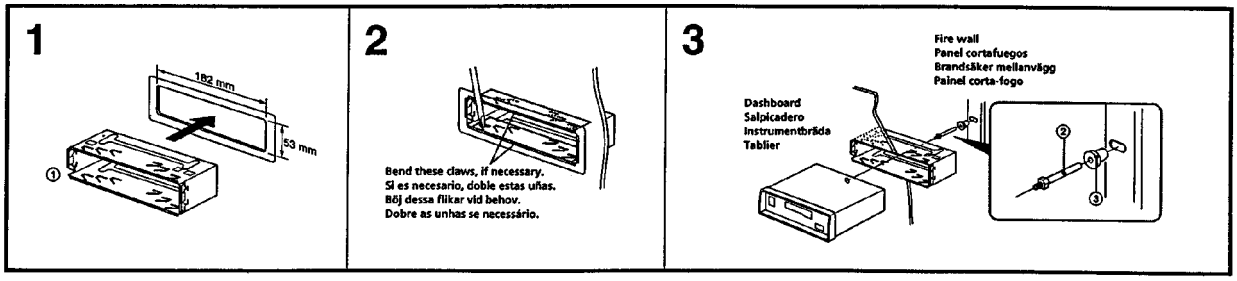
Instalación en el salpicadero

Exempel på montering

Montera på instrumentbrädan

Exemplo de montagem

Instalação no tablier



Note for Connecting

If there is alternator noise (a whining sound when raising engine speed), ground the master unit by connecting it to a metal point of the car with the supplied chassis ground cord ⑤. Connect the ground cord to the master unit with part ② as shown in the illustration.

Nota sobre conexión

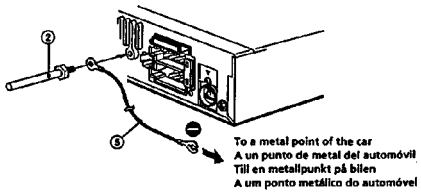
Si el alternador emite ruido (un zumbido al aumentar la velocidad del motor), conecte la unida principal a tierra y, para ello, enchúfela a un punto de metal del automóvil mediante el cable de toma a tierra del chasis ⑤ suministrado. Conecte el cable de toma a tierra a la unidad principal con la pieza ② como se muestra en la ilustración.

Angående anslutningar

Om motorn ger störningar (ett vinande ljud när du gasar) bör du jorda huvudenheten till en metallpunkt på bilen med den medföljande chassijordkabeln ⑤. Anslut jordkabeln till huvudenheten med jordkontakten ② enligt bilden.

Nota sobre a ligação

Se o alterandor começar a produzir ruídos (um som agudo durante o aumento da velocidade do motor), ligue a unidade principal à terra. Para tal, ligue o cabo de terra do chassi ⑤ fornecido a um ponto metálico do automóvel. Ligue o cabo de ligação à terra ao aparelho principal ②, como se mostra na ilustração.


②
⑤
To a metal point of the car
A un punto de metal del automóvil
Till en metallpunkt på bilen
A um ponto metálico do automóvel

XR-C450RDS only

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Connect the unit to the power supply of the car after all other connections are complete.
- **Run all ground wires to a common ground point.**
- Connect pin 4 or pin 7of the unit's power connector to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery wear. **If your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the top of the unit to the ⓪ position, then press the reset button.** The illumination is reset to stay off while the unit is not in use.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓪ position.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Note on the control function

Pin 5 of the unit's power connector supplies + 12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency) or the TA (Traffic Announcement) Function.

Memory hold connection

When pin 4 or pin 7 of the unit's power connector is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Conecte la unidad al suministro de alimentación del automóvil una vez realizadas todas las conexiones.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el terminal 4 o 7 del conector de alimentación de la unidad a un circuito libre del automóvil con una potencia nominal superior a la del fusible de la unidad. Si conecta ésta en serie con otros componentes estéreo, la potencia nominal del circuito del automóvil al que se conecte debe ser superior a la suma de la de los fusibles de los componentes individuales. Si no hay ningún circuito en el automóvil con una potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos en el automóvil disponibles para conectar esta unidad, conéctela a un circuito del automóvil con una potencia nominal superior a la del fusible de la unidad de forma que si dicho fusible se funde no se vean afectados otros circuitos.

Si el automóvil no dispone de posición para accesorios en la llave de encendido — Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si ésta no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⓪ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota

La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ⓪.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

Nota sobre la función de control

El terminal 5 del conector de alimentación de la unidad suministra + 12 V CC al activar el sintonizador o las funciones ATA (Activación automática del sintonizador), AF (Frecuencias alternativas) o TA (Anuncios de tráfico).

Conexión para protección de la memoria

Si se conecta el terminal 4 o 7 del conector de alimentación de la unidad, el circuito de memoria siempre recibirá alimentación aunque desactive la llave de encendido.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Anslutning

Sökerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut enheten till strömförsörjningen sedan alla andra anslutningar gjorts.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut pol 4 eller pol 7 i enhetens strömanslutning till en fri krets med högre märkdata än enheten. Om du ansluter denna enhet i serie med andra stereokomponenter måste den strömkrets de är anslutna till ha högre märkdata än summan av de enskilda komponenternas märkdata. Om det inte finns någon strömkrets med lika höga märkdata som enhetens ansluter du enheten direkt till bilbatteriet. Om det inte finns några bilkretsar tillgängliga för enheten ansluter du den till en bilkrets med högre märkdata än enheten så att inga andra kretsar bryts om enhetens säkring skulle gå.

Montera bilstereon i en bil vars tändlås inte har något strömläge — Omkopplaren POWER SELECT

Innan bilstereon levererades från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon **i en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ⓪, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Observera

Varningssignalen, som varnar om du inte har tagit loss frontpenelen, ljuder inte när omkopplaren POWER SELECT står i läge ⓪.

Nollställningsknappen

Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.

Att observera angående kontrollfunktionen

Pol 5 i enhetens strömanslutning ger + 12 V likström när du slår på radion eller aktiverar någon av funktionerna ATA (Automatic Tuner Activation), AF (Alternative Frequency) eller TA (Traffic Announcement).

Anslutning för minnesstöd

När pol 4 eller pol 7 i enhetens strömanslutning är ansluten förses minneskretsen alltid med ström, även när tändningen slås av.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalarutag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa utag.*

Connexions

Advertência

- Este aparelho foi projectado para funcionar somente com corrente contínua de 12 V com massa negativa.
- Ligue o aparelho à fonte de alimentação do automóvel depois de completar todas as outras ligações.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o pino 4 ou o pino 7 do conector de alimentação do aparelho a um circuito livre do automóvel com uma tensão superior à do fusível do aparelho. Se ligar este aparelho em série com outros componentes estéreo, o circuito do automóvel a que estiverem ligados deve ter uma tensão superior à da soma dos fusíveis dos componentes individuais. Se nenhum circuito do automóvel tiver uma tensão tão elevada como a do fusível do aparelho, ligue-o directamente à bateria. Se nenhum circuito do automóvel estiver disponível para ligação deste aparelho, ligue-o a um circuito do automóvel que tenha uma tensão superior à do fusível do aparelho, de tal modo que, se o fusível rebentar, nenhum outro circuito seja afectado.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios — Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ⓪. Em seguida, carregue no botão de reinicialização.** A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

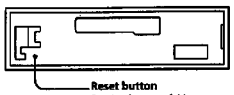
Nota

O alarme de advertência do painel frontal não é activado quando o interruptor POWER SELECT estiver regulado para a posição ⓪.

Change the position with a jeweler's screwdriver, etc.
Cambie la posición con un destornillador de relojero, etc.
Använd en skruvmejsel för finmekaniker eller ett liknande verktyg för att ändra på omkopplarläget.
Altere a posição do interruptor com uma chave de fendas de precisão, etc.

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.



Nota sobre a função do controlo

O pino 5 do conector de alimentação do aparelho fornece + 12 V CC quando se liga o sintonizador ou se activa a função ATA (Activação automática do sintonizador), AF (Frequência alternativa) ou TA (Informações sobre o trânsito).

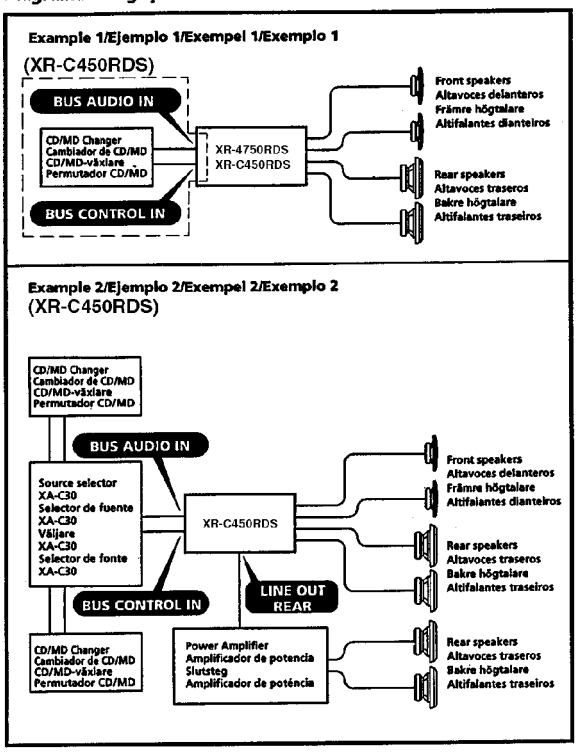
Ligação para alimentação contínua da memória

Quando está ligado o pino 4 ou o pino 7 do conector de alimentação do aparelho, o circuito da memória recebe sempre alimentação, mesmo que não rode a chave da ignição.

Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade adequada de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.*

Connection Diagram
Diagrama de conexiones
Kopplingsschema
Diagrama de ligações



Note
If you connect an optional power amplifier and do not use the built-in amplifier, the beep-tone will be disabled.

Nota
Si conecta un amplificador opcional de potencia y no utiliza el incorporado, los pitidos se desactivarán.

Observera
Om du ansluter en effektförstärkare (tillval) och inte använder den inbyggda förstärkaren deaktiveras ljudsignalen.

Nota
Se ligar um amplificador de potência opcional e não utilizar o amplificador incorporado, desactiva o sinal sonoro.

(XR-C450RDS)

Caution

Cautionary notice for handling the bracket ①.
Handle the bracket carefully to avoid injuring your fingers.

Precaución

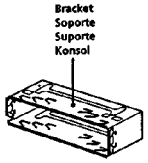
Advertencia sobre la manipulación del soporte ①.
Tenga mucho cuidado al manipular el soporte para evitar posibles lesiones en los dedos.

Varning

Att observera angående konsolen ①.
Hantera konsolen med största aktsamhet så att du inte skadar fingrarna.

Cuidado

Aviso sobre as precauções a tomar no manuseamento do suporte ①.
Pegue no suporte com cuidado para não magoar os dedos.



Power Connection

Power connectors may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are two basic types. You may need to switch the positions of the jump connector. Before connecting the unit the car's power supply, be sure to match the position of the jump connector to the car's pin order. If the auxiliary power connector of your car does not match the connector on the unit, use the supplied connectors ⑦ and ⑧. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

WARNING

Jump connector

Check the pin position of the auxiliary power connector of the car with the table on the right. If positions 4 and 7 are reversed, remove the jump connector and shift it to the rightmost position as shown in the illustration on the left.

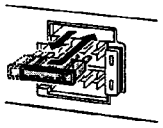
Diagrama de conexión de alimentación

Los conectores de alimentación pueden variar en función del automóvil. Consulte el diagrama del conector de alimentación auxiliar del automóvil para comprobar que las conexiones coinciden correctamente. Existen dos tipos básicos. Es posible que sea necesario cambiar las posiciones del conector de empalme. Antes de conectar la unidad al suministro de alimentación del automóvil, asegúrese de que la posición del conector de empalme coincide con el orden de terminales del dicho automóvil. Si el conector de alimentación auxiliar del automóvil no coincide con el de la unidad, emplee los conectores ⑦ y ⑧ suministrados. Si desea realizar alguna consulta o solucionar algún problema referentes a la conexión de la unidad que no aparezcan en este manual, póngase en contacto con el concesionario automovilístico.

ADVERTENCIA

Conector de empalme

Compruebe la posición de terminal del conector de alimentación auxiliar del automóvil con la tabla de la derecha. Si las posiciones 4 y 7 se invierten, retire el conector de empalme y desplácelo hasta la posición del extremo derecho como se muestra en la ilustración de la izquierda.



Strömanslutningsschema

Strömanslutningarna kan variera beroende på vilken bil du har. Kontrollera bilens diagram över hjälpströmanslutningar för att kontrollera att anslutningarna passar ihop. Det finns två huvudtyper. Du kan behöva ändra positionerna på överkopplingen. Innan du ansluter enheten till bilens strömförsörjning bör du kontrollera att överkopplingens placering överensstämmer med bilens polordning. Om din bils hjälpströmanslutningar inte överenstämmer med anslutningen på enheten använder du de medföljande kontaktdonen ⑦ och ⑧. Om du har några frågor eller problem när det gäller anslutningar i av enheten som inte tas upp i denna bruksanvisning kan du kontakta bilåterförsäljaren.

VARNING

Överkoppling

Jämför bilens hjälpströmanslutning med tabellen till höger. Om positionerna 4 och 7 är omkastade tar du bort överkopplingen och flyttar den till positionen längst till höger, se bilden till vänster.

Diagrama de ligação de corrente

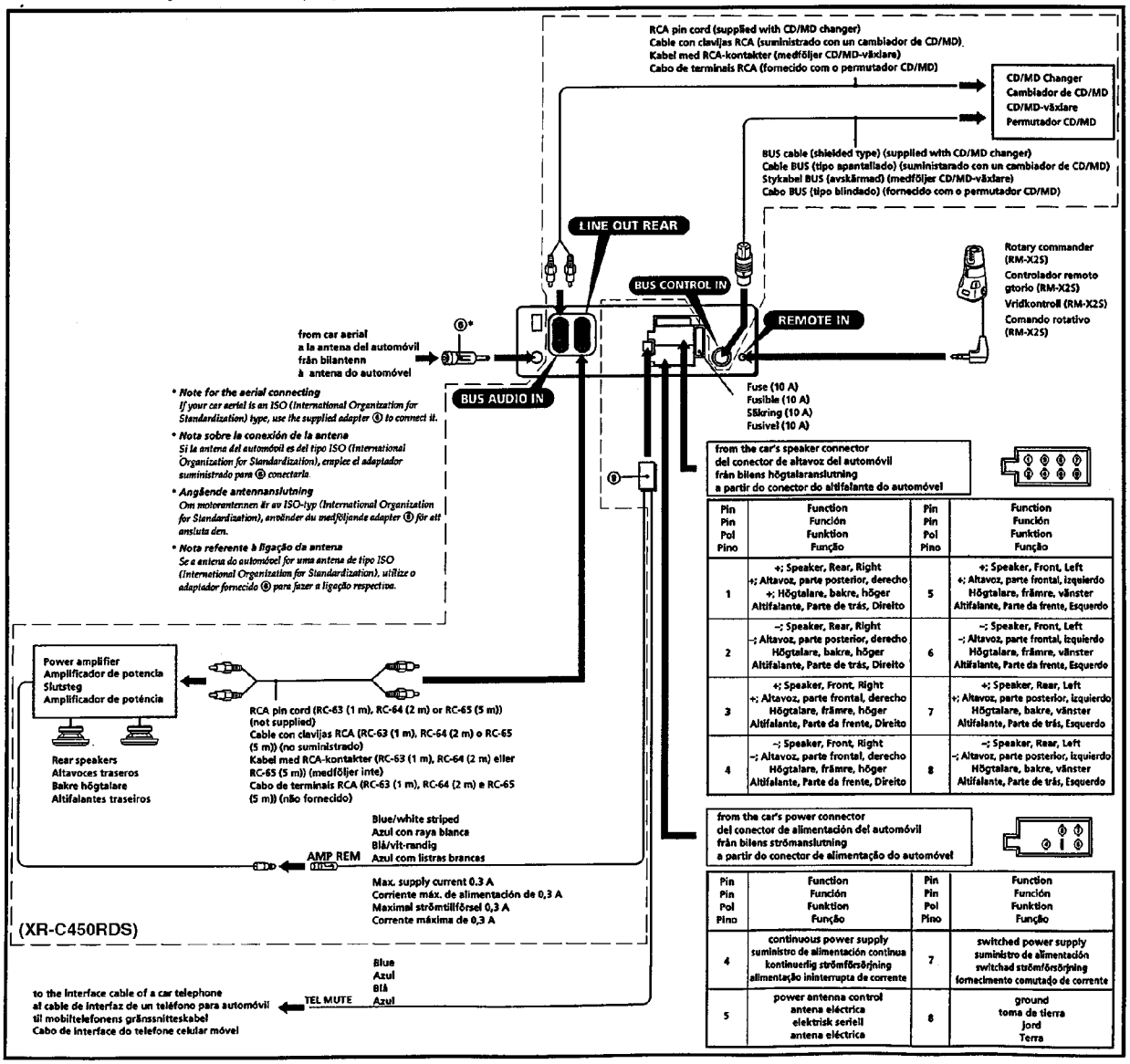
Os conectores de alimentação podem variar de automóvel para automóvel. Verifique o diagrama do conector de alimentação auxiliar do seu automóvel, para ter a certeza de que a correspondência das ligações está correcta. Há dois tipos básicos. Pode ter que trocar as posições do conector jump. Antes de ligar o aparelho à fonte de alimentação do automóvel, não se esqueça de fazer a correspondência entre a posição do conector jump e a ordem dos pinos do automóvel. Se o conector de alimentação auxiliar do seu automóvel não corresponder ao conector do aparelho, utilize os conectores ⑦ e ⑧ fornecidos. Se tiver dúvidas ou problemas ao ligar o aparelho que não estejam referidos neste manual, consulte o vendedor do automóvel.

AVISO

Conector jump

Verifique a posição dos pinos do conector de alimentação auxiliar do automóvel na tabela à direita. Se as posições 4 e 7 estiverem invertidas, remova o conector jump e mude-o para a posição mais à direita, tal como se mostra na ilustração à esquerda.

Connections of Example / Ejemplo de conexiones / Anslutningarna enligt exemplet / Exemplo de ligações


RCA pin cord (supplied with CD/MD changer)
Cable con clavijas RCA (suministrado con un cambiador de CD/MD)
Kabel med RCA-kontakter (medföljer CD/MD-växlare)
Cabo de terminais RCA (fornecido com o permutador CD/MD)
CD/MD Changer
Cambiador de CD/MD
CD/MD-växlare
Permutador CD/MD
BUS cable (shielded type) (supplied with CD/MD changer)
Cable BUS (tipo apantallado) (suministrado con un cambiador de CD/MD)
Stykabel BUS (avskärmad) (medföljer CD/MD-växlare)
Cabo BUS (tipo blindado) (fornecido com o permutador CD/MD)
LINE OUT REAR
BUS CONTROL IN
REMOTE IN
BUS AUDIO IN
Rotary commander (RM-X2S)
Controlador remoto gtorio (RM-X2S)
Vridkontroll (RM-X2S)
Comando rotativo (RM-X2S)
from car aerial
a la antena del automóvil
från bilantenn
à antena do automóvel
Fuse (10 A)
Fusible (10 A)
Säkring (10 A)
Fusível (10 A)
* Note for the aerial connecting
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑤ to connect it.
* Nota sobre la conexión de la antena
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado para ⑤ conectarla.
* Angående antennanslutning
Om motorantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter ⑤ för att ansluta den.
* Nota referente à ligação da antena
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑤ para fazer a ligação respectiva.
from the car's speaker connector
del conector de altavoz del automóvil
från bilens högtalaranslutning
a partir do conector do altifalante do automóvel
Power amplifier
Amplificador de potencia
Slutsteg
Amplificador de poténcia
RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
Cable con clavijas RCA (RC-63 (1 m), RC-64 (2 m) o RC-65 (5 m)) (no suministrado)
Kabel med RCA-kontakter (RC-63 (1 m), RC-64 (2 m) eller RC-65 (5 m)) (medföljer inte)
Cabo de terminais RCA (RC-63 (1 m), RC-64 (2 m) e RC-65 (5 m)) (não fornecido)
Rear speakers
Altavoces traseros
Bakre högtalare
Altifalantes traseiros
Blue/white striped
Azul con raya blanca
Blå/vit-randig
Azul com listras brancas
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
Maximal strömtillförsel 0,3 A
Corrente máxima de 0,3 A
(XR-C450RDS)
from the car's power connector
del conector de alimentación del automóvil
från bilens strömanslutning
a partir do conector de alimentação do automóvel
Blue
Azul
Blå
Azul
TEL MUTE
to the interface cable of a car telephone
al cable de interfaz de un teléfono para automóvil
til mobiltelefonens gränssnittskabel
Cabo de interface do telefone celular móvel

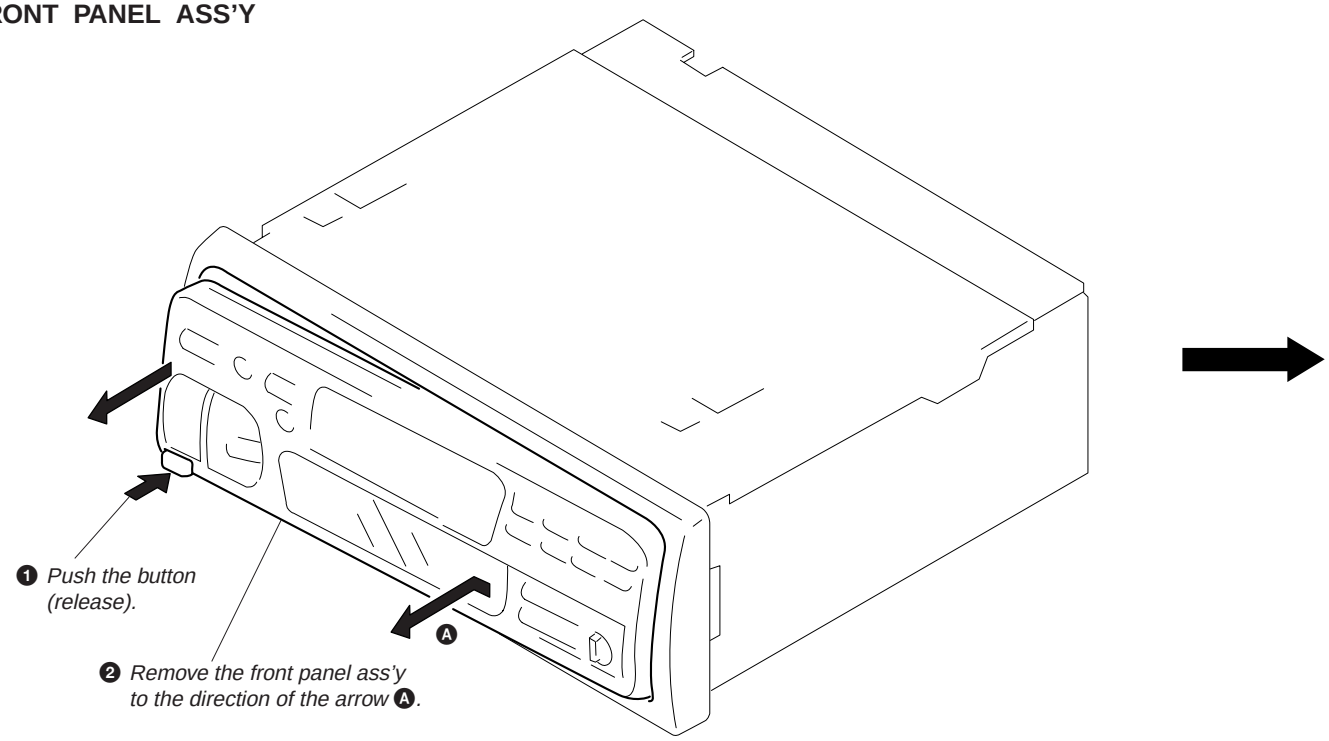
Pin Pin Pol Pino	Function Función Funktion Função	Pin Pin Pol Pino	Function Función Funktion Função
1	+; Speaker, Rear, Right +; Altavoz, parte posterior, derecho +; Högtalare, bakre, höger Altifalante, Parte de trás, Direito	5	+; Speaker, Front, Left +; Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
2	–; Speaker, Rear, Right –; Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	6	–; Speaker, Front, Left –; Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
3	+; Speaker, Front, Right +; Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	7	+; Speaker, Rear, Left +; Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo
4	–; Speaker, Front, Right –; Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	8	–; Speaker, Rear, Left –; Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo

Pin Pin Pol Pino	Function Función Funktion Função	Pin Pin Pol Pino	Function Función Funktion Função
4	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação ininterrupta de corrente	7	switched power supply suministro de alimentación switchad strömförsörjning fornecimento comutado de corrente
5	power antenna control antena eléctrica elektrisk seriell antena eléctrica	8	ground toma de tierra jord Terra

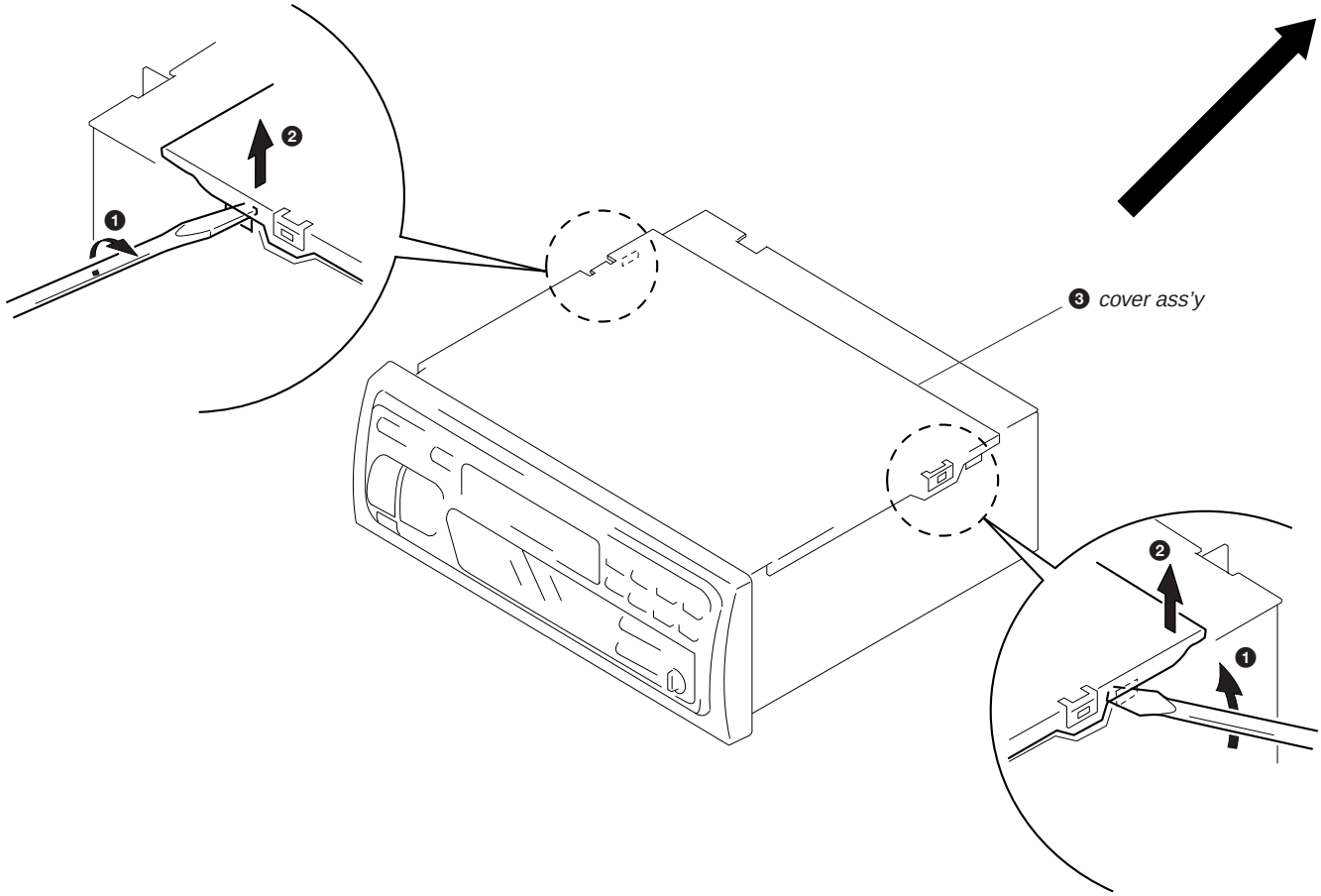
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

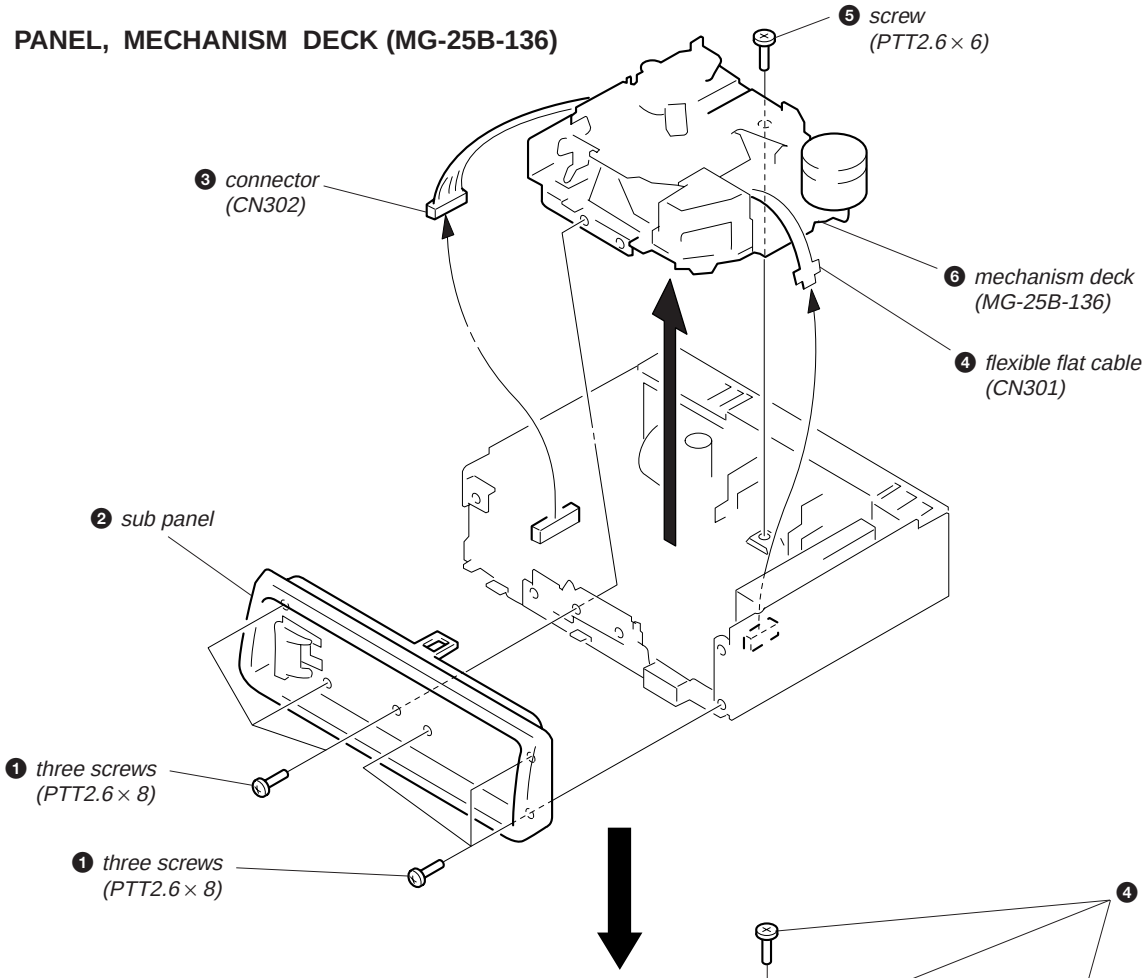
FRONT PANEL ASS'Y



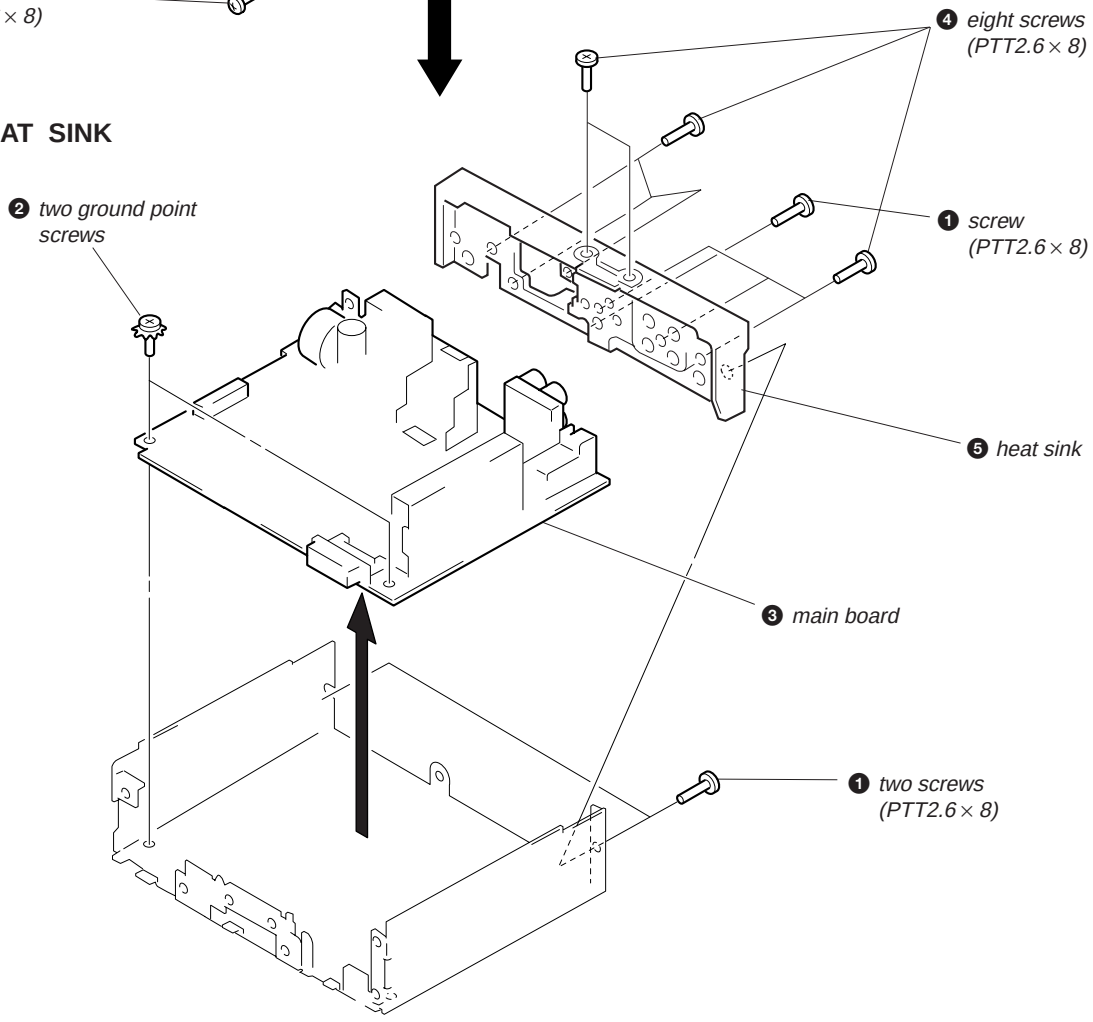
COVER ASS'Y



SUB PANEL, MECHANISM DECK (MG-25B-136)



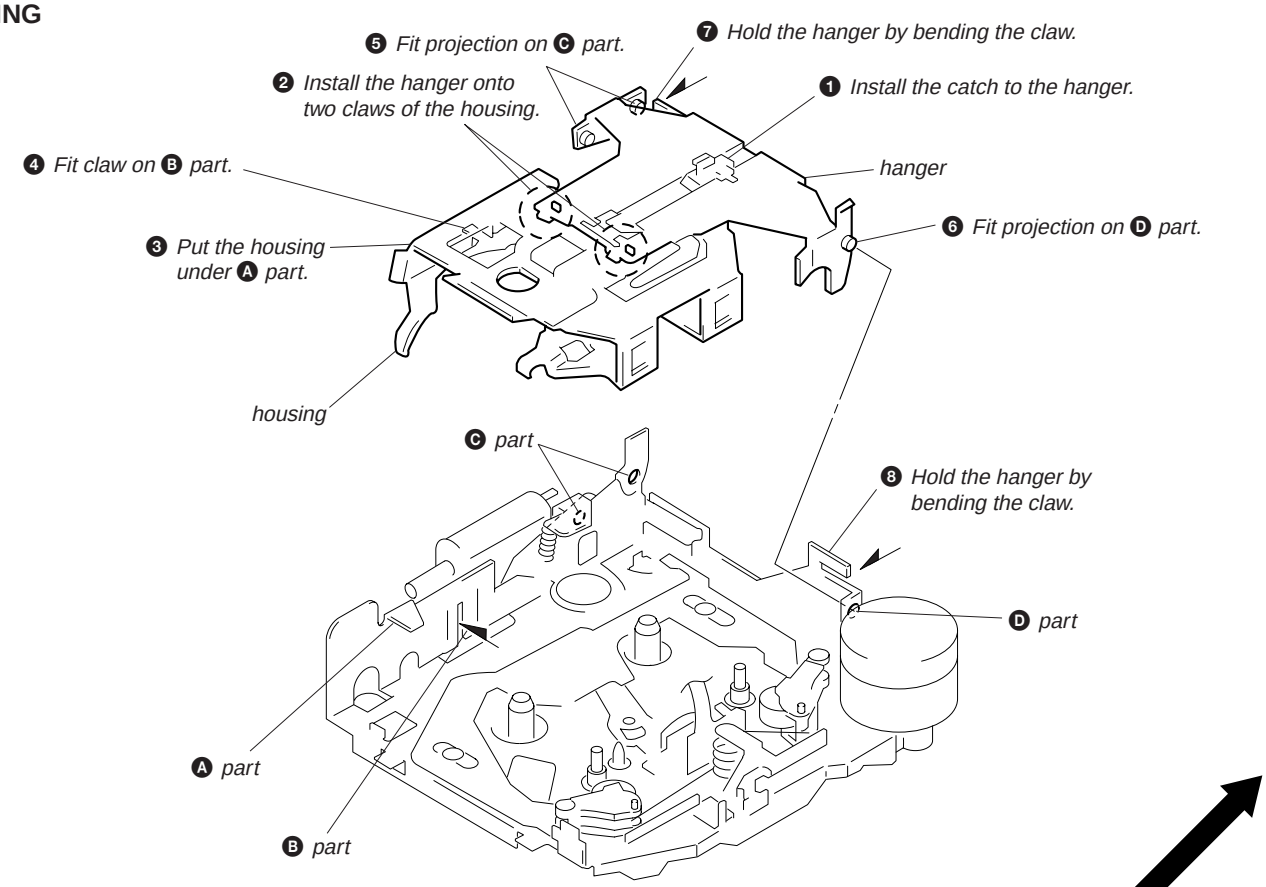
MAIN BOARD, HEAT SINK



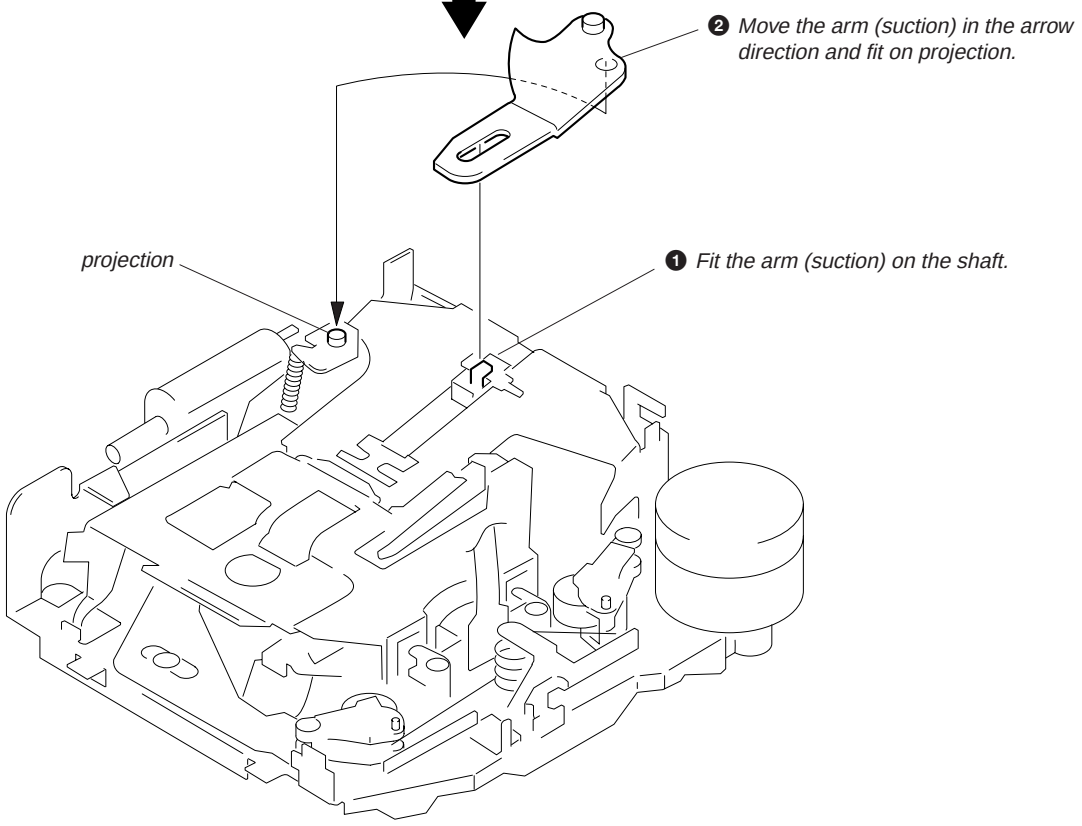
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

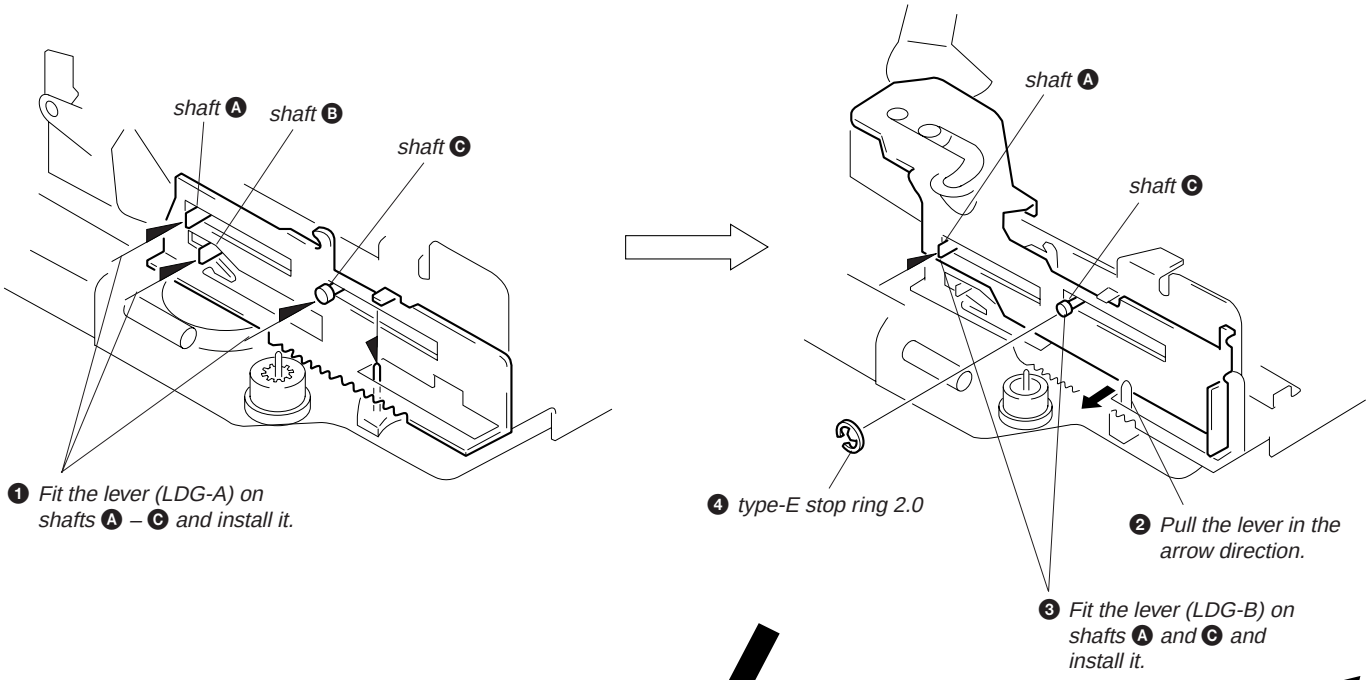
HOUSING


❺ Fit projection on Ⓒ part.
❼ Hold the hanger by bending the claw.
❷ Install the hanger onto two claws of the housing.
❶ Install the catch to the hanger.
❹ Fit claw on Ⓑ part.
hanger
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

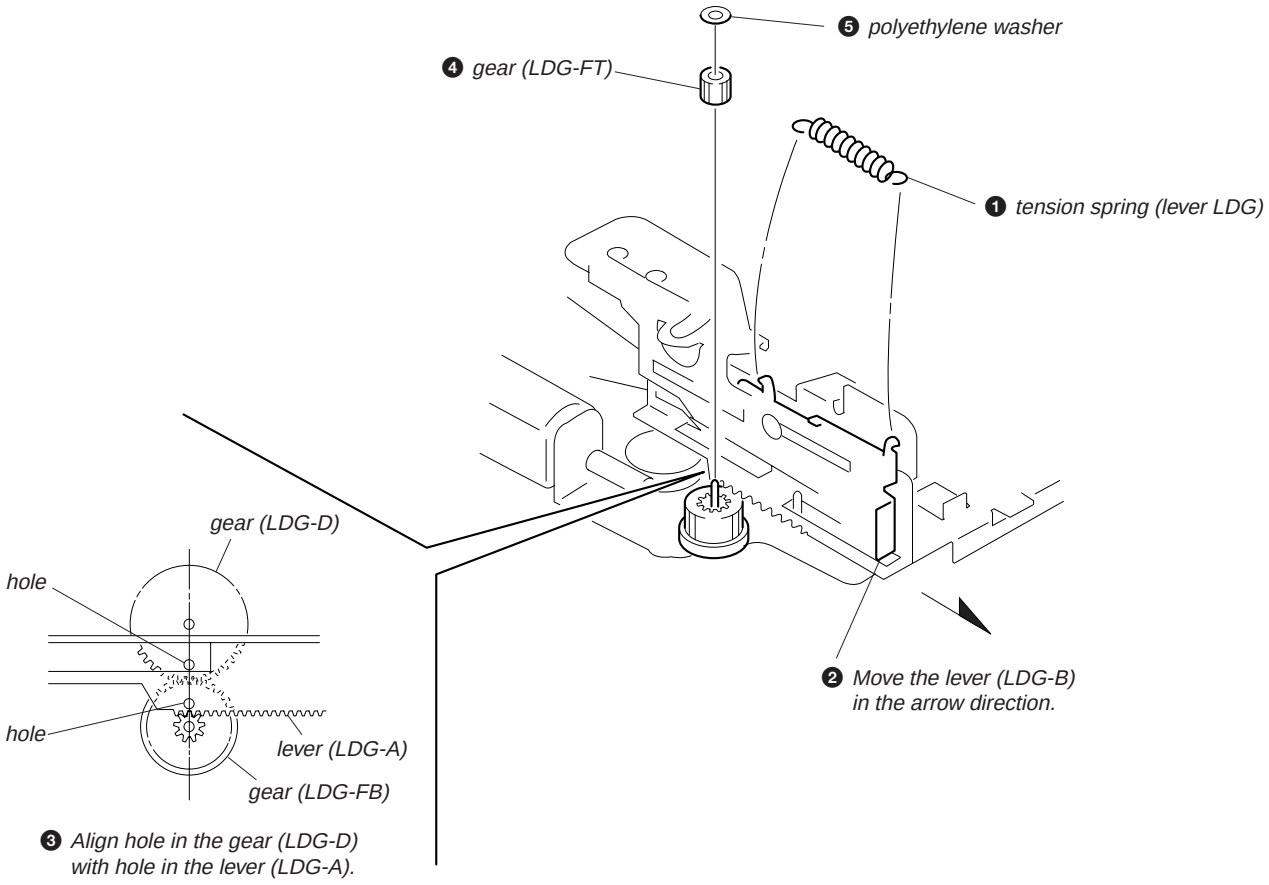
ARM (SUCTION)



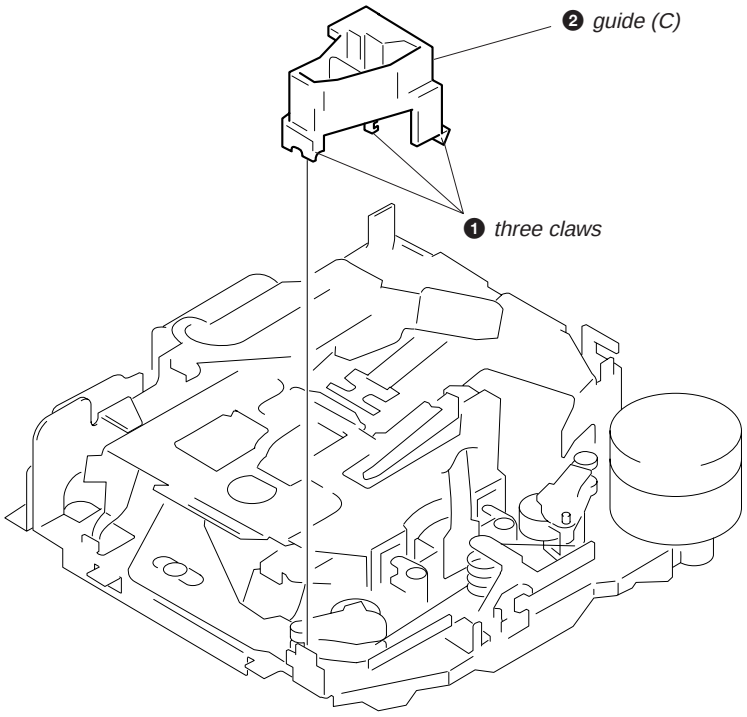
LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓒ
❹ type-E stop ring 2.0
❷ Pull the lever in the arrow direction.
❸ Fit the lever (LDG-B) on shafts Ⓐ and Ⓒ and install it.

GEAR (LDG-FT)


❺ polyethylene washer
❹ gear (LDG-FT)
❶ tension spring (lever LDG)
gear (LDG-D)
hole
hole
lever (LDG-A)
gear (LDG-FB)
❷ Move the lever (LDG-B) in the arrow direction.
❸ Align hole in the gear (LDG-D) with hole in the lever (LDG-A).

GUIDE (C)



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head, pinch roller, rubber belt, capstan, idlers
2. Demagnetize the playback head with a head damagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

- **Torque Measurement**

Mode	Torqu Meter	Meter Reading
Foward	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.5 – 4.5 g•cm (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.5 – 4.5 g•cm (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	60 – 200 g•cm (0.83 – 2.78 oz•inch)

- **Tape Tension Measurement**

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM (MW) Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>
1. Set the "power select" switch (S801) is "A" position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the OFF button, if the clock is not displayed.
3. Push the preset 4 button.
4. Push the preset 5 button.
5. Press the preset 1 button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>
1. Push the OFF button.
2. Set the power select switch (S801) is "B" position.

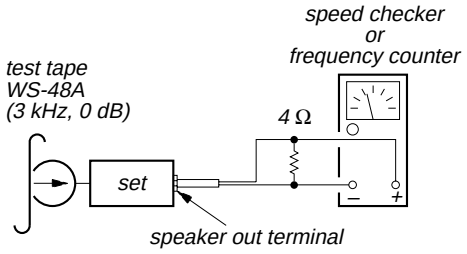
See the adjustment location from on page 18 for the adjustment.

TAPE DECK SECTION | **0 dB=0.775 V**

Tape Speed Adjustment

Procedure:

1. Put the set into the FWD PB mode.



Specification: Constant speed

Speed checker	Frequency counter
–1.5 to +2.5%	2,955 to 3,075 Hz

Adjustment Location: See page 18.

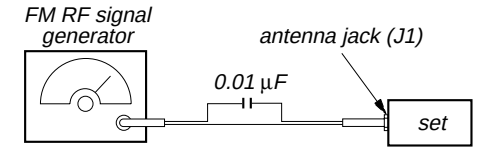
TUNER SECTION | **0dB=1µV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

[Note]
Adjust the tuner section in the sequence shown below.
1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment
3. FM Noise Focus Adjustment
4. FM Signal Meter Adjustment
5. AM (MW) Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

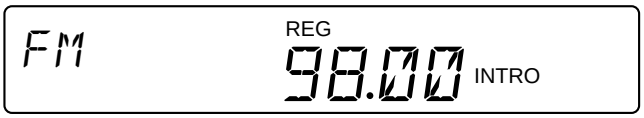
Setting:
SOURCE button: FM



Carrier frequency : 98.0 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

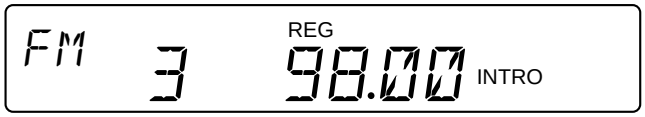
Procedure:
1. Set to the test mode. (See page 15).
2. Push the SOURCE button and set to FM.

Display



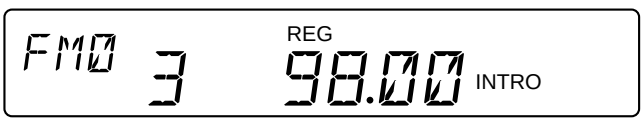
3. Push the preset 3 button.

Display



4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM0" indication on the display window.
   But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

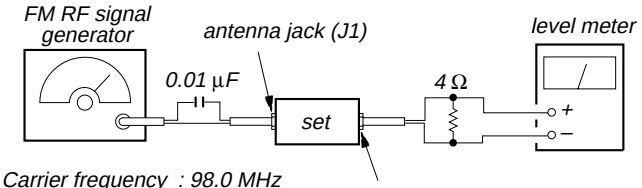
Display



Adjustment Location: See page 18.

FM Stereo Separation Adjustment

Setting:
SOURCE button: FM



Carrier frequency : 98.0 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main: 1 kHz, 20 kHz deviation (26.7%)
sub: 1 kHz, 20 kHz deviation (26.7%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

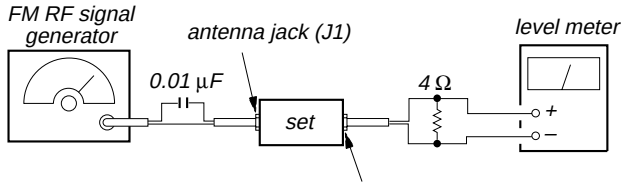
L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

Specification: Separation more than 30 dB

Adjustment Location: See page 18.

FM Noise Focus Adjustment

Setting:
SOURCE button: FM



Carrier frequency : 98.00 MHz
Output level : 60 dB (1 mV)
Mode : stereo
Modulation : 1 kHz, 75 kHz deviation (100%)

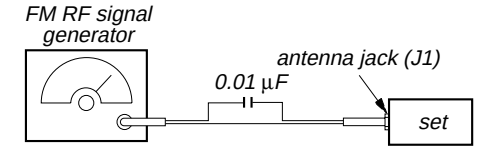
Procedure:
1. Tuner the 98.00 MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (A) –32 ± 2 dB then signal generator input set to –20 dB.

Adjustment Location: See page 18.

FM Signal Meter Adjustment

Setting:

SOURCE button: FM

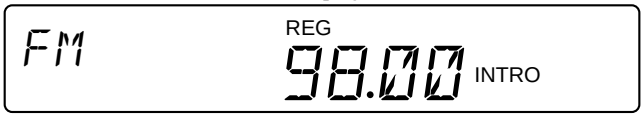


Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure:

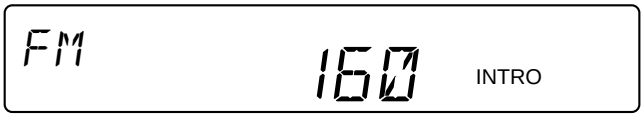
1. Set to the test mode. (See page 15.)
2. Push the SOURCE button and set to FM.

Display



3. Push the 6 button.
4. Adjust RV1 so that the display indication is “160”.

Display



Specification: Display indication: 158 to 162

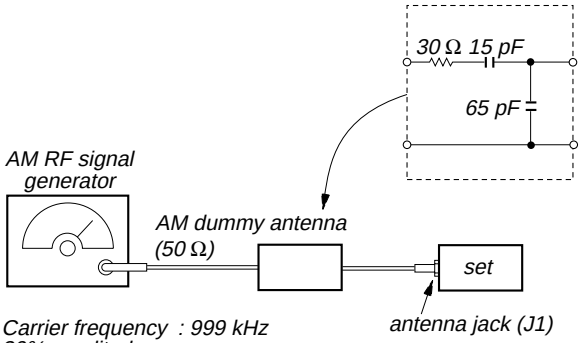
Adjustment Location: See page 18.

AM (MW) Auto Scan/Stop Level Adjustment

Make this adjustment after “FM Auto Scan/Stop Level Adjustment”.

Setting:

SOURCE button: MW

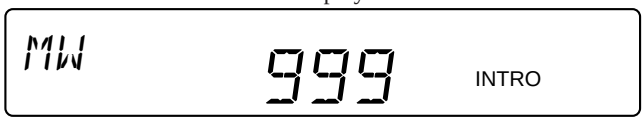


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

1. Set to the test mode. (See page 15.)
2. Push the SOURCE button and set to MW.

Display



3. Push the preset 3 button.

Display

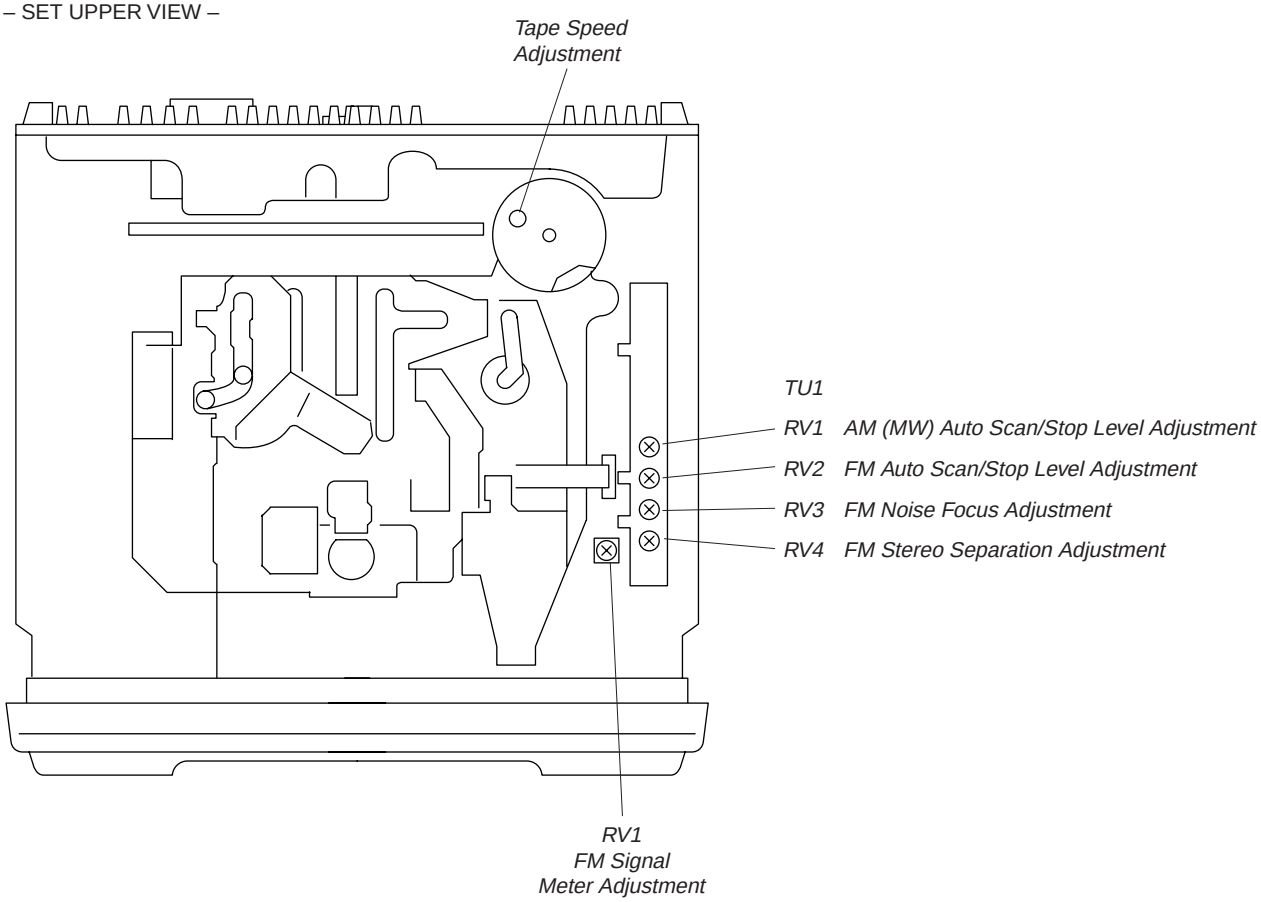
4. Adjust with the volume RV1 on TU1 so that the “MW” indication turns to “MW0” indication on the display window.
   But, in case of already indicated “MW0”, turn the RV1 so that put out light “0” indication and adjustment.

Display

Adjustment Location: See page 18.

Adjustment Location:

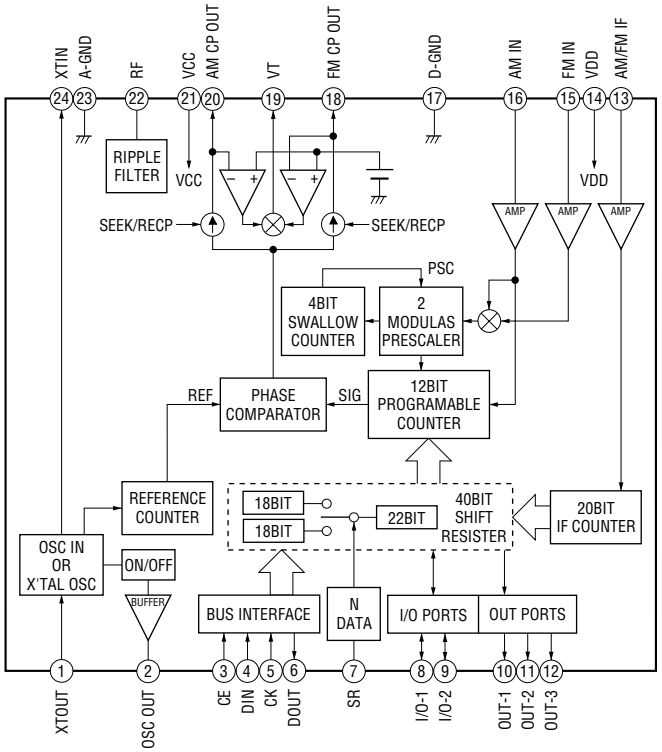
– SET UPPER VIEW –



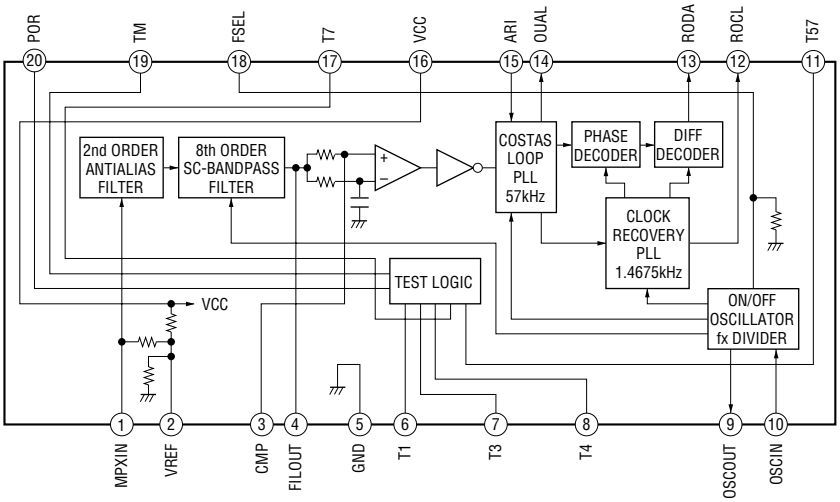
SECTION 6
DIAGRAMS

• IC Block Diagrams –MAIN Section –

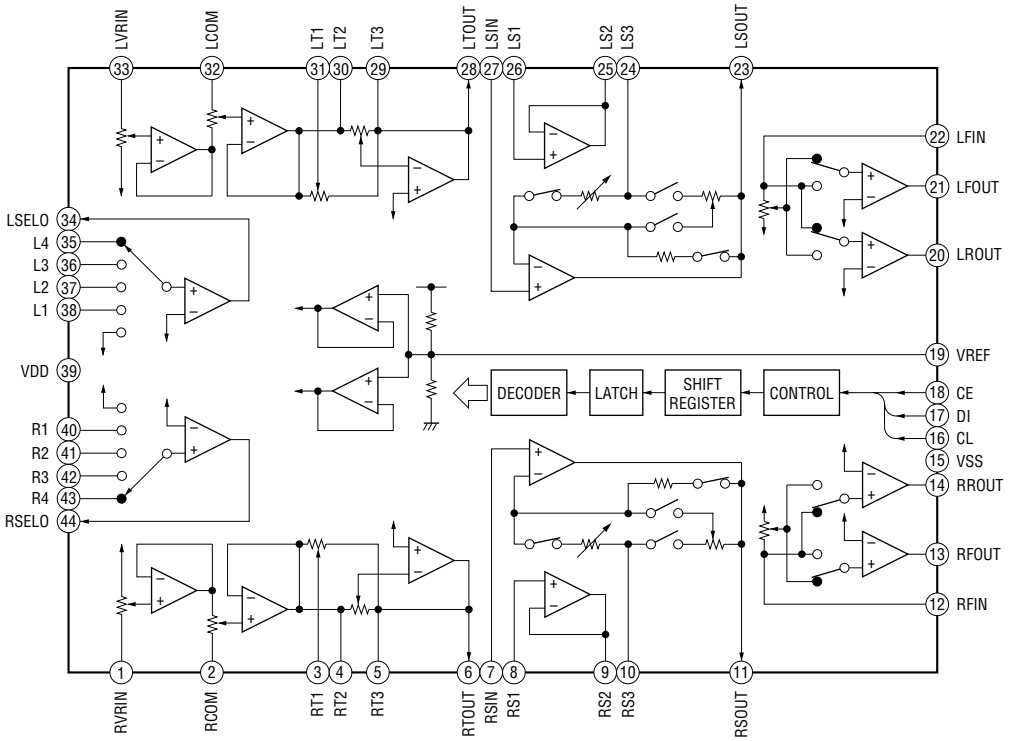
IC1 TB2114F (EL)



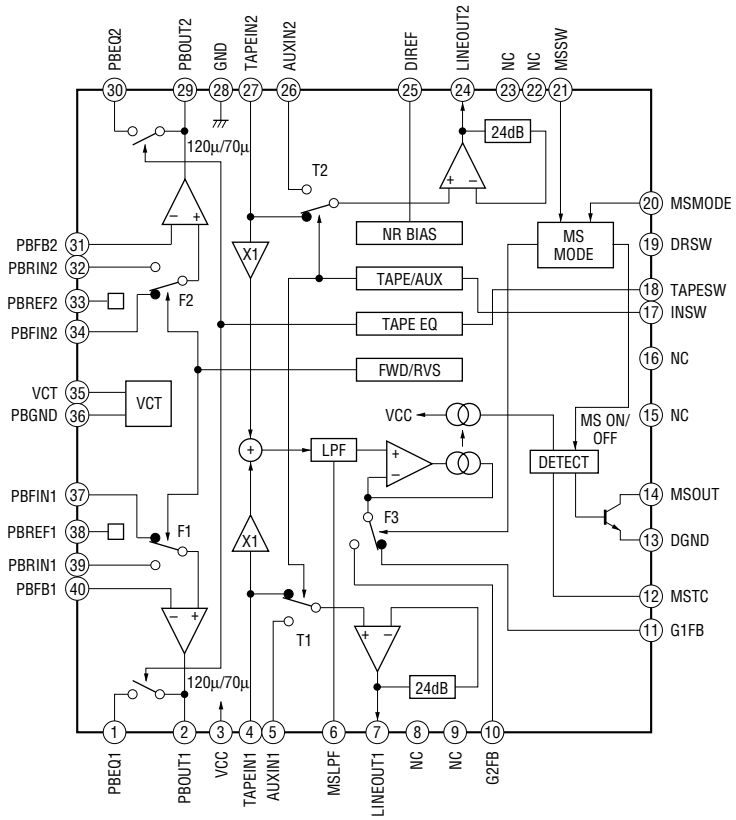
IC3 TDA7330BD-013TR



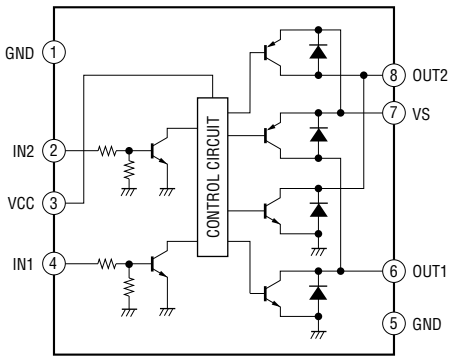
IC151 LC75373ED



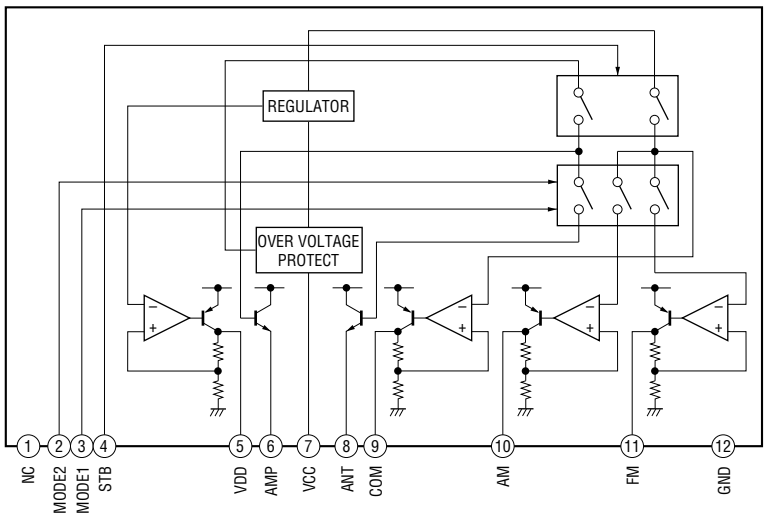
IC351 CXA2509AQ-T4



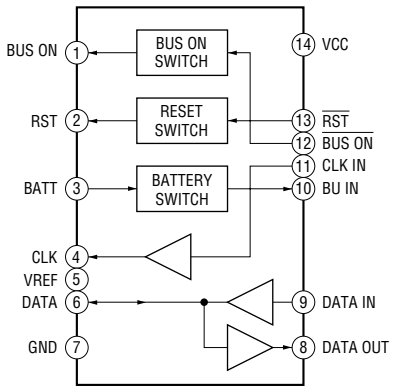
IC360 MM1322XFBE



IC601 BA3918-V2

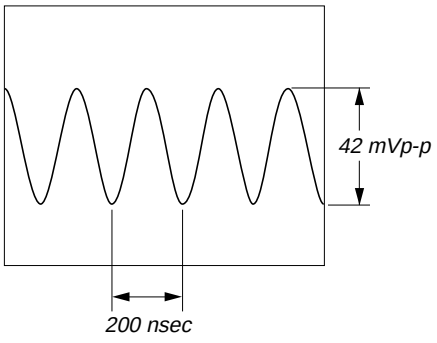


IC701 BA8270F-E2 (XR-C450RDS only)

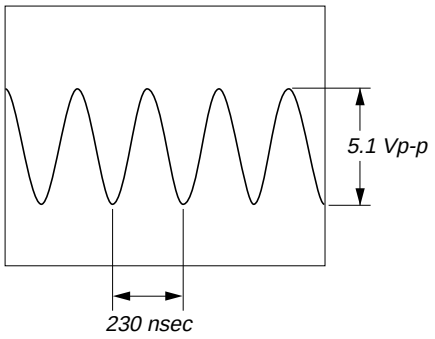


• Waveforms

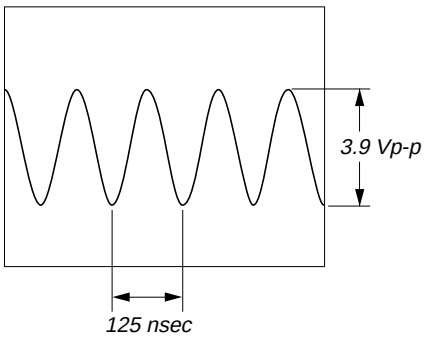
❶ IC1 ① XO



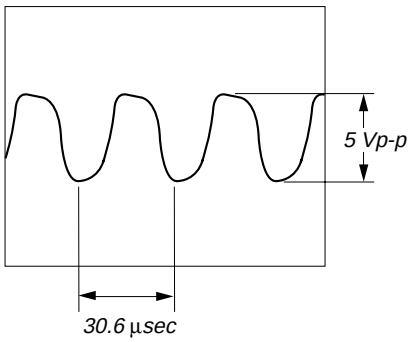
❷ IC3 ⑨ XO



❸ IC501 ⑨ X OUT



❹ IC501 ⑫ XT OUT



6-5. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 MN1884820S4G (XR-4750RDS), MN1886426S4H (XR-C450RDS) (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	TUNMUT	O	Tuner muting control pin At muting: "H"
2	AMPON	O	Power amp power supply control pin
3	ILLON	O	Illumination power supply control pin At PW SEL on: ACC on: "H" At PW SEL off: Power on: "H"
4	PW ON	O	System power supply control pin
5	$\overline{\text{AMPMUT}}$	O	Power amp muting control pin At muting: "L"
6	RC IN1	I	Rotary remote commander input pin (A/D input)
7	VDD	–	Power supply
8	X IN	I	Main system clock input pin (8 MHz)
9	X OUT	O	Main system clock output pin (8 MHz)
10	GND	–	GND
11	XT IN	I	Sub system clock input pin (32.768 kHz)
12	XT OUT	O	Sub system clock output pin (32.768 kHz)
13	EX2	–	Connected to GND
14	$\overline{\text{RESET}}$	I	Reset input pin
15	RDSCKI	I	RDS clock input pin
16	BU IN	I	Back up power supply detection pin
17	KEYACK	O	Key acknowledge signal input pin
18	VOLSO	O	Data output pin to electrical volume
19	VOLCKO	O	Clock output pin to electrical volume
20	VOLCE	O	Chip enable output pin to electrical volume
21	TAPMUT	O	Tape muting control pin At muting: "H"
22	LM LOD	O	Loading motor control pin (loadig direction)
23	LM EJ	O	Loading motor control pin (eject direction)
24	$\overline{\text{AMSON}}$	O	At AMS: "L"
25	$\overline{\text{N}}$ ROUT	O	Forward/reverse control pin
26	$\overline{\text{AMSIN}}$	I	Tape music with/without detection pin "L": with music
27	PLLSO	O	PLL data output pin
28	PLLCKO	O	PLL clock output pin
29	PLLCE	O	PLL chip enable output pin
30	RDSSI	I	RDS data input pin
31	$\overline{\text{AD ON}}$	O	Power supply control pin for A/D conversion
32	DOLON	I/O	DOLBY control input/output pin (Fixed at "H" in this set) At initial mode: valid/invalid selection input of DOLBY function At normal mode: DOLBY on/off output
33	MTLON	I/O	METAL control input/output pin At initial mode: valid/invalid selection input of METAL function At normal mode: METAL on/off output "H": on
34	CM ON	O	Capstan motor control pin
35	TAPON	O	Tape power supply control pin
36	$\overline{\text{ACCON}}$	I	Accessory voltage detection pin
37	PLLSI	I	PLL data input pin

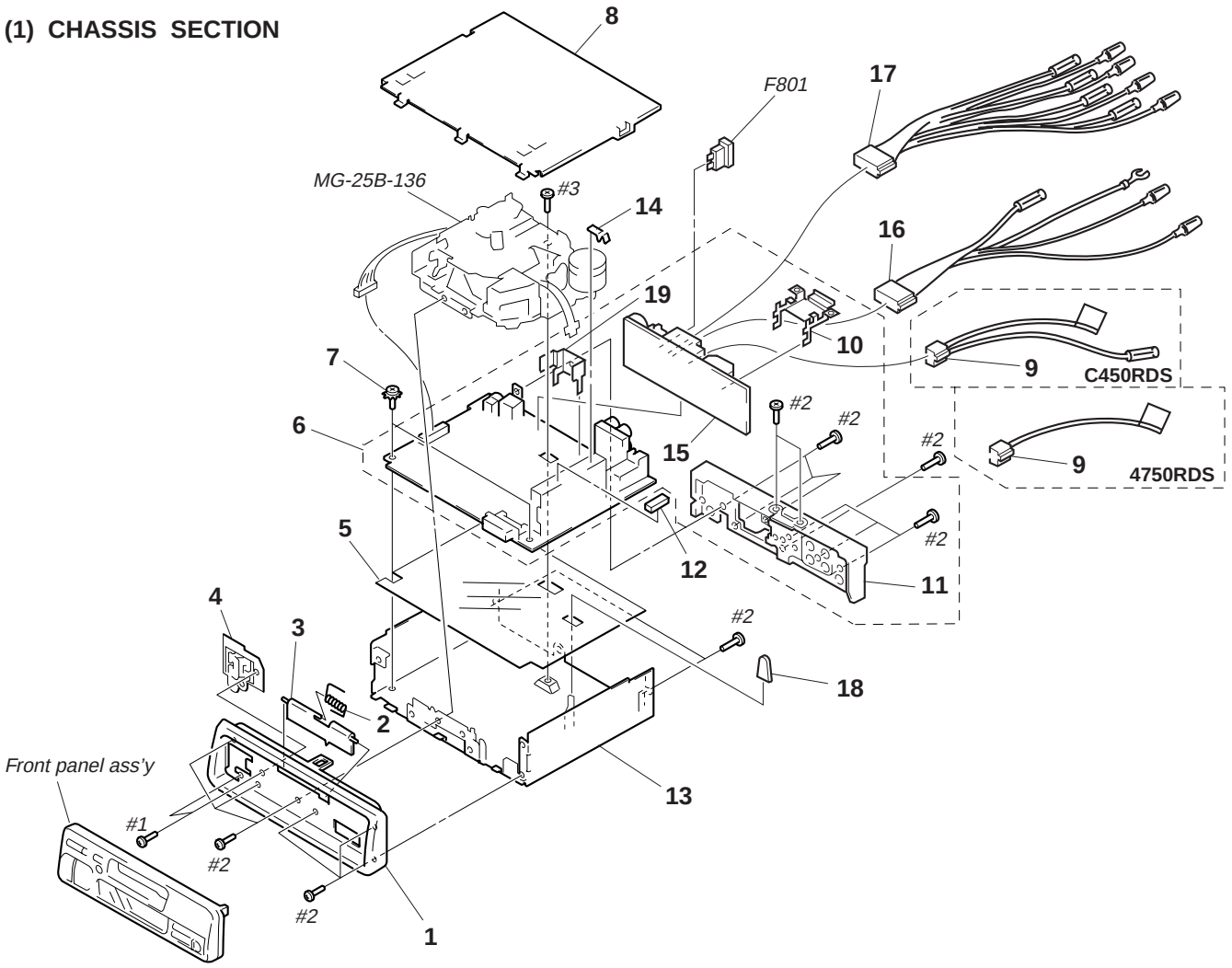
Pin No.	Pin Name	I/O	Function
38	BEEP	O	Beep sound output pin
39	LCDCKO	O	LCD clock output pin
40	LCDSO	O	LCD data output pin
41	$\overline{\text{LCDINH}}$	O	LCD brank indication control pin
42	LCDCE	O	LCD chip enable output pin
43	UNICKO	O	Clock output pin (for SONY BUS) (C450RDS only)
44	UNICKI	I	Clock input pin (for SONY BUS) (C450RDS only)
45	UNISI	I	Data input pin (for SONY BUS) (C450RDS only)
46	UNISO	O	Data output pin (for SONY BUS) (C450RDS only)
47	VDD	–	Power supply
48	AVDD	–	Power supply
49	AVREF+	–	A/D reference voltage input pin
50, 51	KEYIN1,KEYIN0	I	Key input pin (A/D input)
52	D-BASS	I	D-BASS switch input pin (A/D input)
53	KEYSEL	I	Key function setting pin (A/D input)
54	DSTSEL	I	Destination setting pin (A/D input)
55	RC IN0	I	Rotary remote commander input pin (A/D input)
56	VSM1	I	FM/AM multi-pass detection pin
57	VSM0	I	FM/AM signal meter voltage detection pin (A/D input)
58	AVREF–	–	A/D reference voltage input pin
59	AVSS	–	GND
60	GND	–	GND
61	BUSON	O	BUS ON control signai output pin (for SONY BUS) (C450RDS only)
62	$\overline{\text{SYSRST}}$	O	System reset signal output pin (C450RDS only)
63	$\overline{\text{SEKOUT}}$	O	SEEK control signal output pin
64	TUNON	O	Tuner power supply control pin
65	FM ON	O	FM power supply control pin
66	MUT	O	System muting control pin At muting: “H”
67	AF SEK	O	AF seek control signal output pin
68	COLOR	I	Illumination color setting pin “L”: amber, “H”: green
69	$\overline{\text{NOSESW}}$	I	Front panel removal or attaching detection pin
70	$\overline{\text{ST IN}}$	I/O	Stereo detection signal input and forced monaural signal output pin
71	SD IN	I	Station detection signal input pin
72	REL T	I	Reel table rotation detection pin
73-76	POS3-POS0	I	Tape position detection pin
77	PW SEL	I	Power select switch input pin
78	$\overline{\text{TELMUTE}}$	I	Telephone muting detection pin “L”: 20 dB audio muting
79	$\overline{\text{TEST}}$	I	Test mode setting pin
80	ILLIN	I	ILLIN signal detection pin

SECTION 7
EXPLODED VIEWS

NOTE:

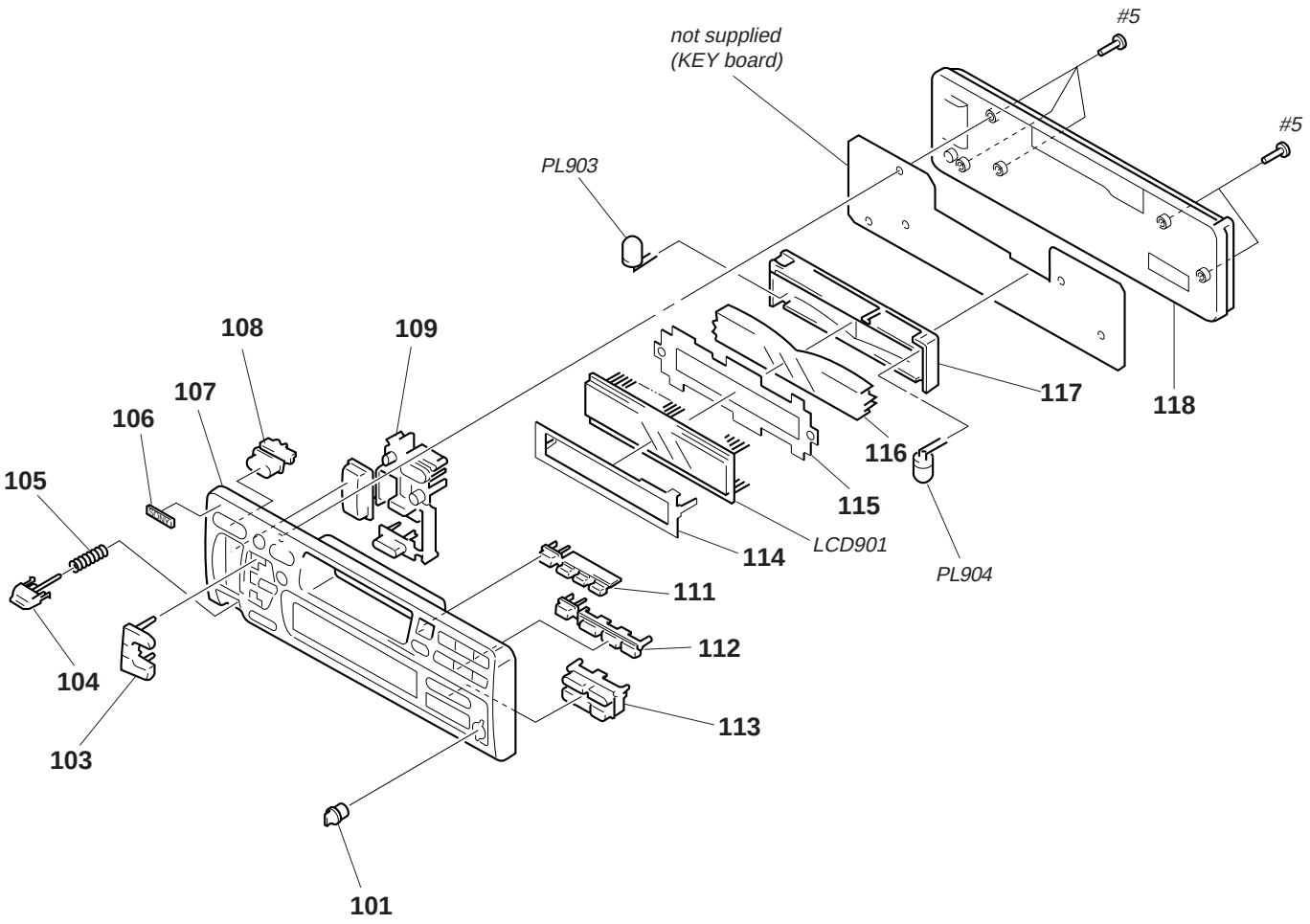
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.
- Abbreviation
  G: German

(1) CHASSIS SECTION



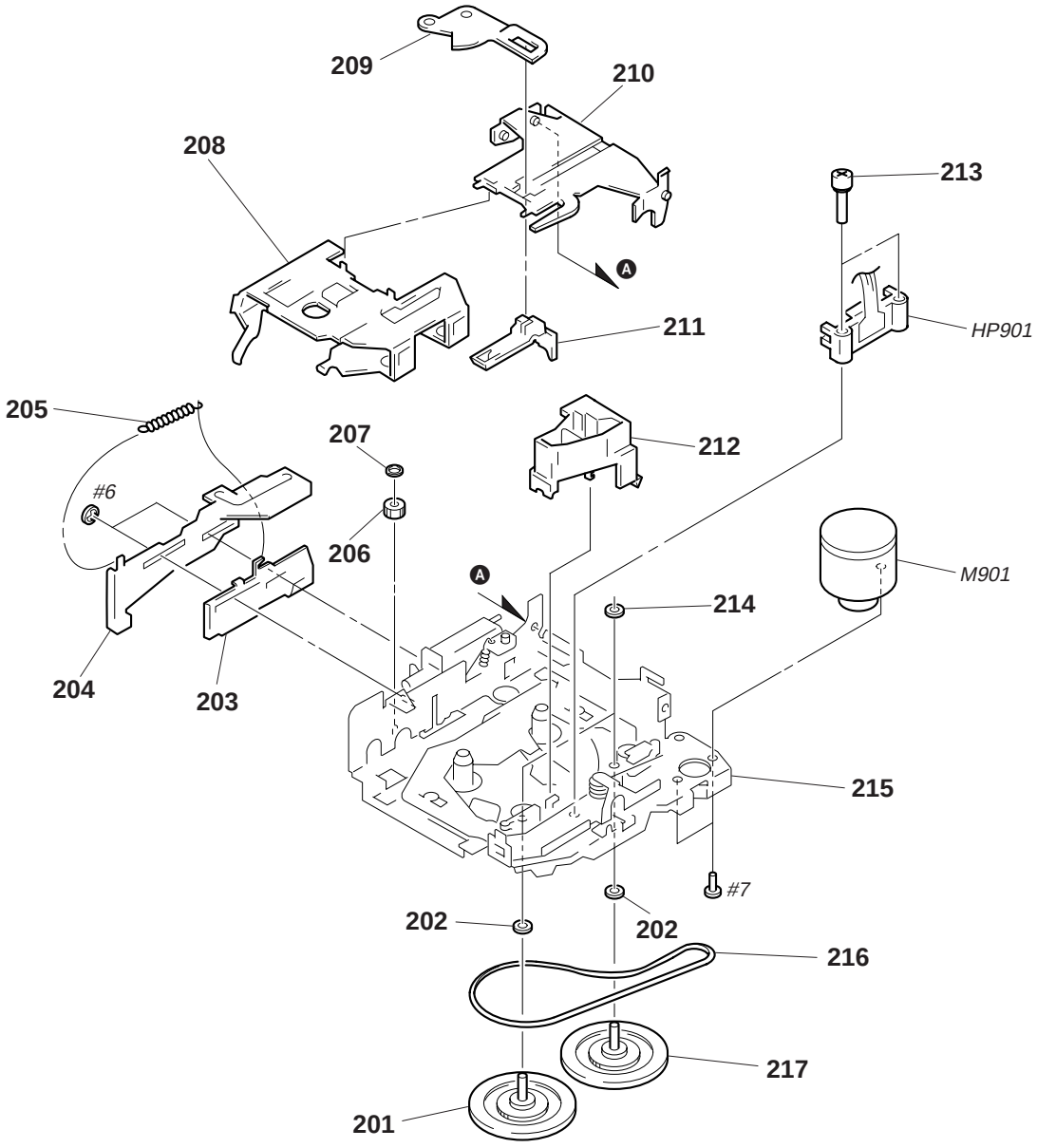
Ref. No.	Part No.	Description	Remark
1	3-009-294-01	PANEL, SUB	
2	3-935-003-01	SPRING, TORSION	
3	3-932-205-21	DOOR, CASSETTE	
4	X-3367-636-1	LOCK ASSY	
* 5	3-009-306-01	SHEET, INSULATING	
* 6	A-3309-739-A	MAIN BOARD, COMPLETE (C450RDS: AEP, UK)	
* 6	A-3309-743-A	MAIN BOARD, COMPLETE (C450RDS: G)	
* 6	A-3309-825-A	MAIN BOARD, COMPLETE (4750RDS: AEP, UK)	
* 6	A-3309-829-A	MAIN BOARD, COMPLETE (4750RDS: G)	
7	3-915-923-01	SCREW, GROUND POINT	
* 8	X-3373-269-1	COVER ASSY (ISO)	
9	1-777-989-11	CORD (WITH CONNECTOR) (AMP REM/TEL MUTE) (C450RDS)	
9	1-777-989-31	CORD (WITH CONNECTOR) (TEL MUTE) (4750RDS)	
* 10	3-009-307-01	BRACKET (IC)	
* 11	3-009-293-01	HEAT SINK (C450RDS)	
* 11	3-010-471-01	HEAT SINK (4750RDS)	
12	9-911-840-XX	CUSHION (U)	
* 13	3-009-813-01	CHASSIS	
14	3-937-650-01	PLATE (C), GROUND	
* 15	A-3309-740-A	POWER BOARD, COMPLETE	
16	1-782-092-11	CORD (WITH CONNECTOR) (POWER)	
17	1-782-093-11	CORD (WITH CONNECTOR) (SPEAKER)	
* 18	3-012-859-01	CAP, RUBBER (25)	
* 19	3-012-105-01	BRACKET (HS)	
F801	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
101	3-009-301-01	BUTTON (D-BASS)	
103	3-009-299-01	BUTTON (L2) (+. –) (C450RDS)	
103	3-010-472-01	BUTTON (L2) (+. –) (4750RDS)	
104	3-009-304-01	BUTTON (RELEASE)	
105	3-932-475-01	SPRING (RELEASE)	
106	3-904-194-01	EMBLEM (NO. 2.5), SONY (C450RDS)	
107	X-3373-662-1	PANEL SUB ASSY (C450RDS)	
107	X-3373-663-1	PANEL SUB ASSY (4750RDS)	
108	3-009-300-01	BUTTON (SOURCE)	
109	3-009-297-01	BUTTON (L) (+ ▶▶I ▶▶. SEEK AMS. I◀◀ ◀◀ –. ●. OFF. ●. SEL. MUTE)	(C450RDS)
109	3-009-867-01	BUTTON (L) (+ ▶▶I ▶▶. SEEK AMS. I◀◀ ◀◀ –. ●. OFF. ●. SEL. MUTE)	(C450RDS)
111	3-009-308-01	BUTTON (1-3) (⏏. 1. 2. 3) (C450RDS)	
111	3-010-473-01	BUTTON (1-3) (⏏. 1. 2. 3) (4750RDS)	
112	3-009-309-01	BUTTON (4-6) (SENS. 4. 5. 6) (C450RDS)	
112	3-010-474-11	BUTTON (4-6) (SENS. 4. 5. 6) (4750RDS)	
113	3-009-298-01	BUTTON (R) (PTY. AF/TA. – DISK +) (C450RDS)	
113	3-009-314-01	BUTTON (R) (2) (PTY. AF/TS. –DISK+) (4750RDS)	
* 114	3-010-282-01	PLATE (LCD), GROUND	
* 115	3-009-305-01	SHEET (REFLECTOR)	
* 116	3-009-302-01	PLATE (LCD), LIGHT GUIDE	
* 117	3-009-303-01	HOLDER (LCD)	
118	3-009-295-01	PANEL, FRONT BACK (C450RDS)	
118	3-010-519-01	PANEL, FRONT BACK (4750RDS)	
LCD901	1-801-587-11	DISPLAY PANEL, LIQUID CRYSTAL	
PL903	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	
PL904	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	

(3) MECHANISM DECK SECTION (MG-25B-136)



Ref. No.	Part No.	Description	Remark
201	A-3291-667-A	CLUTCH (FR) ASSY	
202	3-701-437-21	WASHER	
* 203	3-008-883-01	LEVER (LDG-A)	
* 204	3-008-884-01	LEVER (LDG-B)	
205	3-008-890-01	SPRING (LEVER LDG), TENSION	
206	3-933-335-01	GEAR (LDG-FT)	
207	3-341-753-11	WASHER, POLYETHYLENE	
208	3-008-861-01	HOUSING	
* 209	3-008-882-01	ARM (SUCTION)	
210	3-008-860-01	HANGER	
211	3-008-874-02	CATCHER	
212	3-933-344-01	GUIDE (C)	
213	3-927-100-01	SCREW (+PS 2X10), SPECIAL	
214	3-364-151-01	WASHER	
215	A-3291-919-A	CHASSIS ASSY (A)	
216	3-928-675-01	BELT (52)	
217	3-936-853-01	FLYWHEEL (F)	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

KEY

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Abbreviation
  G: German

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		*********	
*	3-009-302-01	PLATE (LCD), LIGHT GUIDE	
*	3-009-303-01	HOLDER (LCD)	
*	3-009-305-01	SHEET (REFLECTOR)	
*	3-010-282-01	PLATE (LCD), GROUND	
		< CAPACITOR >	
C901	1-163-033-11	CERAMIC CHIP 0.022uF 50V	
C902	1-165-319-11	CERAMIC CHIP 0.1uF 50V	
C903	1-165-319-11	CERAMIC CHIP 0.1uF 50V	
C904	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< CONNECTOR >	
CN901	1-764-423-11	PIN, CONNECTOR 12P	
		< DIODE >	
D901	8-719-420-90	DIODE MA8051-M	
D902	8-719-422-64	DIODE MA8062-M	
D903	8-719-422-64	DIODE MA8062-M	
D904	8-719-422-64	DIODE MA8062-M	
D905	8-719-422-64	DIODE MA8062-M	
		< IC >	
IC901	8-759-365-90	IC LC75824W	
		< CHIP CONDUCTOR >	
JC901	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-801-587-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< SWITCH >	
LSW901	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (OFF)	(4750RDS: AMBER)
LSW901	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (OFF)	(4750RDS: GREEN)
LSW901	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (OFF)	(C450RDS)
LSW902	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	(4750RDS: AMBER)
LSW902	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	(4750RDS: GREEN)
LSW902	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	(C450RDS)
LSW903	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (MODE)	(4750RDS: AMBER)
LSW903	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (MODE)	(4750RDS: GREEN)
LSW903	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MODE)	(C450RDS)
LSW904	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (+, ▶▶I ▶▶)	(4750RDS: AMBER)
LSW904	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+, ▶▶I ▶▶)	(4750RDS: GREEN)
LSW904	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (+, ▶▶I ▶▶)	(C450RDS)
LSW905	1-762-617-11	SWITCH, KEY BOARD (WITH LED)(I◀◀ ◀◀, –)	(4750RDS: AMBER)
LSW905	1-762-619-11	SWITCH, KEY BOARD (WITH LED)(I◀◀ ◀◀, –)	(4750RDS: GREEN)
LSW905	1-762-620-11	SWITCH, KEY BOARD (WITH LED)(I◀◀ ◀◀, –)	(C450RDS)
LSW906	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (–)	(4750RDS: AMBER)
LSW906	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (–)	(4750RDS: GREEN)
LSW906	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (–)	(C450RDS)
LSW907	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (SEL)	(4750RDS: AMBER)
LSW907	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SEL)	(4750RDS: GREEN)
LSW907	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SEL)	(C450RDS)
LSW908	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (+)	(4750RDS: AMBER)
LSW908	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+)	(4750RDS: GREEN)
LSW908	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (+)	(C450RDS)

Ref. No.	Part No.	Description	Remark
LSW909	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	(C450RDS)
LSW910	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (MUTE)	(4750RDS: AMBER)
LSW910	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (MUTE)	(4750RDS: GREEN)
LSW910	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MUTE)	(C450RDS)
LSW911	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (BTM, SENS)	(C450RDS)
LSW921	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (⏏)	(4750RDS: AMBER)
LSW921	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (⏏)	(4750RDS: GREEN)
LSW921	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏏)	(C450RDS)
LSW922	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (INTRO, 1)	(4750RDS: AMBER)
LSW922	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (INTRO, 1)	(4750RDS: GREEN)
LSW922	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (INTRO, 1)	(C450RDS)
LSW923	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (REPEAT, 2)	(4750RDS: AMBER)
LSW923	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (REPEAT, 2)	(4750RDS: GREEN)
LSW923	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (REPEAT, 2)	(C450RDS)
LSW924	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (3)	(4750RDS: AMBER)
LSW924	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (3)	(4750RDS: GREEN)
LSW924	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SHUF, 3)	(C450RDS)
LSW925	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (BL. SKIP, 6)	(4750RDS: AMBER)
LSW925	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (BL. SKIP, 6)	(4750RDS: GREEN)
LSW925	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (BL. SKIP, 6)	(C450RDS)
LSW926	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (ATA, 5)	(4750RDS: AMBER)
LSW926	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (ATA, 5)	(4750RDS: GREEN)
LSW926	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (ATA, 5)	(C450RDS)
LSW927	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (MTL, 4)	(4750RDS: AMBER)
LSW927	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (MTL, 4)	(4750RDS: GREEN)
LSW927	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MTL, 4)	(C450RDS)
LSW928	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (PTY)	(4750RDS: AMBER)
LSW928	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (PTY)	(4750RDS: GREEN)
LSW928	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (PTY)	(C450RDS)
LSW929	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	(4750RDS: AMBER)
LSW929	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	(4750RDS: GREEN)
LSW929	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	(C450RDS)
LSW930	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (BTM, SENS)	(4750RDS: AMBER)
LSW930	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (BTM, SENS)	(4750RDS: GREEN)
LSW930	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DISC, +)	(C450RDS)
LSW931	1-762-617-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	(4750RDS: AMBER)
LSW931	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	(4750RDS: GREEN)
LSW931	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DISC, –)	(C450RDS)

< PILOT LAMP >

PL903	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	
PL904	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	

< TRANSISTOR >

Q901	8-729-106-60	TRANSISTOR 2SB1115A (C450RDS)	
Q902	8-729-106-60	TRANSISTOR 2SB1115A (C450RDS)	
Q903	8-729-900-53	TRANSISTOR DTC114EK (C450RDS)	
Q904	8-729-900-53	TRANSISTOR DTC114EK (C450RDS)	

< RESISTOR/CHIP CONDUCTOR >

R901	1-216-045-00	METAL CHIP	680	5%	1/10W
R902	1-216-045-00	METAL CHIP	680	5%	1/10W
R903	1-216-045-00	METAL CHIP	680	5%	1/10W
R904	1-216-049-00	METAL CHIP	1K	5%	1/10W
R905	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R906	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R909	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R910	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (C450RDS)
R921	1-216-045-00	METAL CHIP	680	5%	1/10W
R922	1-216-045-00	METAL CHIP	680	5%	1/10W
R923	1-216-045-00	METAL CHIP	680	5%	1/10W
R924	1-216-049-00	METAL CHIP	1K	5%	1/10W
R925	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R926	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R927	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
R928	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R929	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R930	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (4750RDS)
R930	1-216-295-00	CONDUCTOR, CHIP (2012) (C450RDS)			
R931	1-216-073-00	METAL CHIP	10K	5%	1/10W (4750RDS)
R931	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (C450RDS)
R932	1-216-077-00	METAL CHIP	15K	5%	1/10W (4750RDS)
R932	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R951	1-216-041-00	METAL CHIP	470	5%	1/10W
R952	1-216-109-00	METAL CHIP	330K	5%	1/10W
R953	1-216-049-00	METAL CHIP	1K	5%	1/10W
R954	1-216-049-00	METAL CHIP	1K	5%	1/10W
R955	1-216-049-00	METAL CHIP	1K	5%	1/10W
R956	1-216-049-00	METAL CHIP	1K	5%	1/10W
R957	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R958	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (C450RDS)
R959	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R960	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (C450RDS)
R961	1-216-037-00	METAL CHIP	330	5%	1/10W (4750RDS: AMBER, C450RDS)
R961	1-216-033-00	METAL CHIP	220	5%	1/10W (4750RDS: GREEN)
R962	1-216-033-00	METAL CHIP	220	5%	1/10W (C450RDS)
R963	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER, C450RDS)
R963	1-216-025-00	METAL CHIP	100	5%	1/10W (4750RDS: GREEN)
R964	1-216-025-00	METAL CHIP	100	5%	1/10W (C450RDS)
R965	1-216-037-00	METAL CHIP	330	5%	1/10W (4750RDS: AMBER, C450RDS)
R965	1-216-033-00	METAL CHIP	220	5%	1/10W (4750RDS: GREEN)
R966	1-216-033-00	METAL CHIP	220	5%	1/10W (C450RDS)
R967	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER, C450RDS)
R967	1-216-021-00	METAL CHIP	68	5%	1/10W (4750RDS: GREEN)
R968	1-216-021-00	METAL CHIP	68	5%	1/10W (C450RDS)
R969	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER, C450RDS)
R969	1-216-025-00	METAL CHIP	100	5%	1/10W (4750RDS: GREEN)
R970	1-216-021-00	METAL CHIP	68	5%	1/10W (C450RDS)
R971	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER, C450RDS)
R971	1-216-021-00	METAL CHIP	68	5%	1/10W (4750RDS: GREEN)
R972	1-216-021-00	METAL CHIP	68	5%	1/10W (C450RDS)
R973	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER)
R973	1-216-025-00	METAL CHIP	100	5%	1/10W (4750RDS: GREEN)
R974	1-216-029-00	METAL CHIP	150	5%	1/10W (4750RDS: AMBER)
R974	1-216-025-00	METAL CHIP	100	5%	1/10W (4750RDS: GREEN)
R981	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R982	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R983	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R984	1-216-081-00	METAL CHIP	22K	5%	1/10W
R999	1-216-295-00	CONDUCTOR, CHIP (2012) (4750RDS: AMBER)			
R999	1-216-308-00	METAL CHIP	4.7	5%	1/10W (4750RDS: GREEN)
		< SWITCH >			
SW951	1-762-937-11	SWITCH, ROTARY (D-BASS)			
**********					
*	A-3309-825-A	MAIN BOARD, COMPLETE (4750RDS: AEP, UK)			
*	A-3309-829-A	MAIN BOARD, COMPLETE (4750RDS: G)			
*	A-3309-739-A	MAIN BOARD, COMPLETE (C450RDS: AEP, UK)			
*	A-3309-743-A	MAIN BOARD, COMPLETE (C450RDS: G)			
		**********			
*	3-009-307-01	BRACKET (IC)			
*	3-010-471-01	HEAT SINK (4750RDS)			
*	3-009-293-01	HEAT SINK (C450RDS)			
*	3-012-105-01	BRACKET (HS)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-126-157-11	ELECT	10uF	20%	16V
C4	1-126-157-11	ELECT	10uF	20%	16V
C5	1-126-157-11	ELECT	10uF	20%	16V
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C12	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C13	1-163-037-11	CERAMIC CHIP	0.0022uF	10%	50V
C14	1-164-161-11	CERAMIC CHIP	2200PF	5%	100V
C15	1-124-584-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remark
C16	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C17	1-124-463-00	ELECT	0.1uF	20%	50V
C18	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C19	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C20	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C21	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C22	1-163-077-00	CERAMIC CHIP	0.1uF	10%	50V
C23	1-126-933-11	ELECT	100uF	20%	16V
C24	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C25	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C26	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C28	1-126-157-11	ELECT	10uF	20%	16V
C29	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C30	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C31	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C32	1-126-160-11	ELECT	1uF	20%	50V
C34	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C35	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C36	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C101	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C102	1-126-160-11	ELECT	1uF	20%	50V
C103	1-126-160-11	ELECT	1uF	20%	50V
C111	1-126-160-11	ELECT	1uF	20%	50V
C112	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C113	1-126-160-11	ELECT	1uF	20%	50V
C114	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C115	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C116	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C118	1-126-157-11	ELECT	10uF	20%	16V
C119	1-126-157-11	ELECT	10uF	20%	16V
C120	1-126-157-11	ELECT	10uF	20%	16V
C121	1-126-157-11	ELECT	10uF	20%	16V
C122	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C123	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C124	1-126-096-11	ELECT	10uF	20%	35V (C450RDS)
C151	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C152	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C153	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C155	1-124-234-00	ELECT	22uF	20%	16V
C157	1-124-584-00	ELECT	100uF	20%	10V
C158	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C201	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C202	1-126-160-11	ELECT	1uF	20%	50V
C203	1-126-160-11	ELECT	1uF	20%	50V
C211	1-126-160-11	ELECT	1uF	20%	50V
C212	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C213	1-126-160-11	ELECT	1uF	20%	50V
C214	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C215	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C216	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C218	1-126-157-11	ELECT	10uF	20%	16V
C219	1-126-157-11	ELECT	10uF	20%	16V
C220	1-126-157-11	ELECT	10uF	20%	16V
C221	1-126-157-11	ELECT	10uF	20%	16V
C222	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C223	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C224	1-126-096-11	ELECT	10uF	20%	35V (C450RDS)
C301	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C303	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C304	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C305	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C308	1-126-160-11	ELECT	1uF	20%	50V
C309	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C350	1-124-234-00	ELECT	22uF	20%	16V
C351	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C353	1-124-465-00	ELECT	0.47uF	20%	50V
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C356	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C357	1-124-584-00	ELECT	100uF	20%	10V
C362	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C363	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C365	1-126-157-11	ELECT	10uF	20%	16V
C366	1-126-157-11	ELECT	10uF	20%	16V
C367	1-126-934-11	ELECT	220uF	20%	16V
C401	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C402	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C403	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C404	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C405	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C408	1-126-160-11	ELECT	1uF	20%	50V
C409	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C410	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C501	1-124-584-00	ELECT	100uF	20%	10V
C502	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C503	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C504	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C505	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C506	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C507	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C582	1-124-257-00	ELECT	2.2uF	20%	50V
C583	1-124-589-11	ELECT	47uF	20%	16V
C584	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C601	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C603	1-125-710-11	DOUBLE LAYER	0.1F		5.5V

MAIN

Ref. No.	Part No.	Description				Remark
C605	1-126-157-11	ELECT	10uF	20%	16V	
C606	1-126-157-11	ELECT	10uF	20%	16V	
C607	1-126-157-11	ELECT	10uF	20%	16V	
C609	1-124-589-11	ELECT	47uF	20%	16V	
C610	1-124-234-00	ELECT	22uF	20%	16V	
C612	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C614	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C615	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	(C450RDS)
C617	1-126-157-11	ELECT	10uF	20%	16V	
C618	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C650	1-126-936-11	ELECT	3300uF	20%	16V	
C660	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C701	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	(4750RDS)
C701	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	(C450RDS)
C702	1-165-319-11	CERAMIC CHIP	0.1uF		50V	(C450RDS)
C703	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	(C450RDS)
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	(C450RDS)
		< CONNECTOR/JACK >				
CN351	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P				
* CN352	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P				
CN602	1-764-422-11	PLUG, CONNECTOR 12P				
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)				(C450RDS)
CNJ150	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN/LINE OUT REAR)				(C450RDS)
		< DISCHARGE GAP >				
* CP1	1-517-422-11	GAP, DISCHARGE				
		< DIODE >				
D2	8-719-991-65	DIODE SB02W03C				
D3	8-719-423-07	DIODE MA8100-L-TX				
D150	8-719-075-80	DIODE MA8180-M-TX (C450RDS)				
D350	8-719-404-49	DIODE MA111				
D361	8-719-423-07	DIODE MA8100-L-TX				
D362	8-719-911-19	DIODE 1SS119				
D501	8-719-422-12	DIODE MA8039				
D504	8-719-400-20	DIODE MA152WA				
D506	8-719-911-19	DIODE 1SS119				
D583	8-719-404-49	DIODE MA111				
D584	8-719-422-12	DIODE MA8039				
D601	8-719-423-32	DIODE MA8120-M				
D605	8-719-977-03	DIODE DTZ5.6B				
D606	8-719-017-67	DIODE MA8068H				
D607	8-719-801-78	DIODE 1SS184				
D609	8-719-422-64	DIODE MA8062-M				
D610	8-719-422-64	DIODE MA8062-M				
D611	8-719-109-97	DIODE RD6.8ES-B2				
D612	8-719-109-97	DIODE RD6.8ES-B2				
D613	8-719-034-94	DIODE MA4180-M(QZ)				
D614	8-719-109-97	DIODE RD6.8ES-B2				
D615	8-719-109-97	DIODE RD6.8ES-B2				
D616	8-719-422-64	DIODE MA8062-M				
D617	8-719-422-64	DIODE MA8062-M				
D621	8-719-970-02	DIODE 1SR139-400				
D622	8-719-970-02	DIODE 1SR139-400				(C450RDS)
D624	8-719-404-49	DIODE MA111				
D651	8-719-018-04	DIODE MA8240-TX				(C450RDS)
D652	8-719-018-04	DIODE MA8240-TX				
D653	8-719-422-76	DIODE MA8075-M				
D660	8-719-422-64	DIODE MA8062-M				
D661	8-719-404-49	DIODE MA111				
D701	8-719-057-80	DIODE MA8160-M-TX				
D702	8-719-422-80	DIODE MA8075-H-TX				(4750RDS)
D703	8-719-422-67	DIODE MA8062-H				(C450RDS)
D704	8-719-422-64	DIODE MA8062-M				(C450RDS)
D705	8-719-422-64	DIODE MA8062-M				(C450RDS)
D706	8-719-422-64	DIODE MA8062-M				(C450RDS)
		< IC >				
IC1	8-759-448-88	IC TB2114F(EL)				
IC3	8-759-163-63	IC TDA7330BD-013TR				
IC151	8-759-443-67	IC LC75373ED				
IC351	8-752-079-78	IC CXA2509AQ-T4				
IC360	8-759-395-97	IC MM1322XFBE				
IC501	8-759-451-03	IC MN1884820S4G				(4750RDS)
IC501	8-759-451-04	IC MN1886426S4H				(C450RDS)
IC571	8-759-940-45	IC S-8054HN-CB				(4750RDS)
IC571	8-759-363-81	IC XC61AN4002PR				(C450RDS)
IC601	8-759-347-49	IC BA3918-V2				
IC701	8-759-449-89	IC BA8270F-E2				(C450RDS)
		< JACK >				
J1	1-764-808-14	JACK (FM/AM ANTENNA)				
J501	1-566-822-41	JACK (REMOTE IN)				
		< CHIP CONDUCTOR >				
JC5	1-216-295-00	CONDUCTOR, CHIP				(2012)
JC7	1-216-295-00	CONDUCTOR, CHIP				(2012)
JC8	1-216-295-00	CONDUCTOR, CHIP				(2012)
JC9	1-216-295-00	CONDUCTOR, CHIP				(2012)
JC10	1-216-295-00	CONDUCTOR, CHIP				(2012)
JC11	1-216-295-00	CONDUCTOR, CHIP				(2012)

Ref. No.	Part No.	Description		Remark
JC14	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC15	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC16	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC17	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC18	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC20	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC21	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC22	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC23	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC24	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC27	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC28	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC29	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC30	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC31	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC32	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC33	1-216-295-00	CONDUCTOR, CHIP	(2012) (C450RDS)	
JC34	1-216-295-00	CONDUCTOR, CHIP	(2012) (C450RDS)	
JC35	1-216-295-00	CONDUCTOR, CHIP	(2012) (C450RDS)	
JC36	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC37	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC38	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC50	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC51	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC52	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC53	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC54	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC56	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC57	1-216-296-00	CONDUCTOR, CHIP	(3216) (C450RDS)	
JC58	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC59	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC60	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC62	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC63	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC65	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC66	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC67	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC68	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC69	1-216-296-00	CONDUCTOR, CHIP	(3216) (C450RDS)	
JC70	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC71	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC72	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC73	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC74	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC75	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC76	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC77	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC78	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC79	1-216-296-00	CONDUCTOR, CHIP	(3216) (C450RDS)	
JC80	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC81	1-216-296-00	CONDUCTOR, CHIP	(3216)	
		< COIL >		
L1	1-412-006-31	INDUCTOR, CHIP 10uH		
L2	1-410-509-11	INDUCTOR, MICRO 10uH		
L4	1-410-509-11	INDUCTOR 10uH		
L501	1-410-509-11	INDUCTOR 10uH		
		< TRANSISTOR >		
Q2	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q101	8-729-920-21	TRANSISTOR DTC314TKH04		
Q102	8-729-920-21	TRANSISTOR DTC314TKH04		
Q103	8-729-920-21	TRANSISTOR DTC314TKH04		
Q201	8-729-920-21	TRANSISTOR DTC314TKH04		
Q202	8-729-920-21	TRANSISTOR DTC314TKH04		
Q203	8-729-920-21	TRANSISTOR DTC314TKH04		
Q361	8-729-015-11	TRANSISTOR 2SD1802FAST-TL		
Q362	8-729-020-67	TRANSISTOR XN1A312-TX		
Q364	8-729-106-60	TRANSISTOR 2SB1115A		
Q365	8-729-900-53	TRANSISTOR DTC114EK		
Q501	8-729-020-67	TRANSISTOR XN1A312-TX		
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q581	8-729-020-67	TRANSISTOR XN1A312-TX		
Q603	8-729-423-99	TRANSISTOR 2SD2137-OP		
Q605	8-729-020-67	TRANSISTOR XN1A312-TX		
Q606	8-729-027-23	TRANSISTOR DTA114EKA-T146		
Q608	8-729-027-23	TRANSISTOR DTA114EKA-T146		
Q609	8-729-015-11	TRANSISTOR 2SD1802FAST-TL		
Q610	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q701	8-729-900-53	TRANSISTOR DTC114EK		
Q702	8-729-020-67	TRANSISTOR XN1A312-TX (4750RDS)		
		< RESISTOR/CHIP CONDUCTOR >		
R1	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R2	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	
R3	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R4	1-216-097-00	METAL CHIP	100K 5% 1/10W	
R5	1-216-017-00	METAL CHIP	47 5% 1/10W	
R6	1-216-077-00	METAL CHIP	15K 5% 1/10W	
R7	1-216-075-00	METAL CHIP	12K 5% 1/10W	
R8	1-216-025-00	METAL CHIP	100 5% 1/10W	
R9	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	
R11	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R14	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	
R15	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R16	1-216-071-00	METAL CHIP	8.2K 5% 1/10W	
R17	1-216-129-00	METAL CHIP	2.2M 5% 1/10W	
R18	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R19	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R101	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	

MAIN

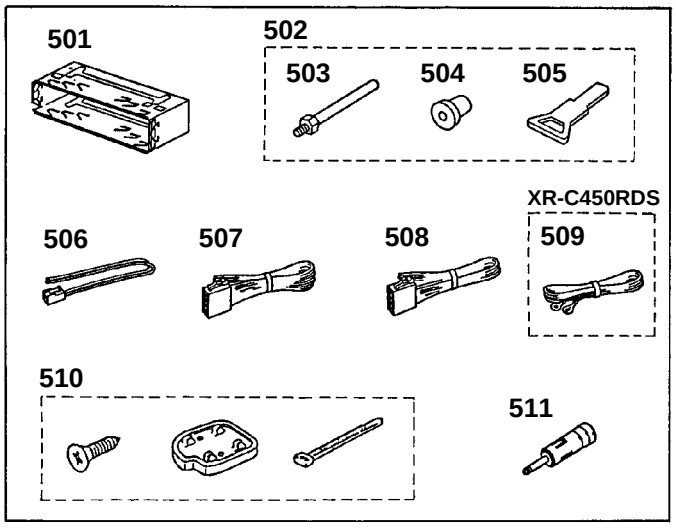
Ref. No.	Part No.	Description			Remark
R102	1-216-085-00	METAL CHIP	33K	5%	1/10W
R103	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R104	1-216-190-00	METAL CHIP	470	5%	1/8W
R105	1-216-190-00	METAL CHIP	470	5%	1/8W
R108	1-216-077-00	METAL CHIP	15K	5%	1/10W
R109	1-216-077-00	METAL CHIP	15K	5%	1/10W
R110	1-216-077-00	METAL CHIP	15K	5%	1/10W
R111	1-216-077-00	METAL CHIP	15K	5%	1/10W
R112	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R113	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R118	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (C450RDS)
R119	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R151	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R201	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R202	1-216-085-00	METAL CHIP	33K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-041-00	METAL CHIP	470	5%	1/10W
R205	1-216-041-00	METAL CHIP	470	5%	1/10W
R208	1-216-077-00	METAL CHIP	15K	5%	1/10W
R209	1-216-077-00	METAL CHIP	15K	5%	1/10W
R210	1-216-077-00	METAL CHIP	15K	5%	1/10W
R211	1-216-077-00	METAL CHIP	15K	5%	1/10W
R212	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R213	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R218	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (C450RDS)
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R303	1-216-077-00	METAL CHIP	15K	5%	1/10W
R304	1-216-081-00	METAL CHIP	22K	5%	1/10W
R305	1-216-109-00	METAL CHIP	330K	5%	1/10W
R306	1-216-190-00	METAL CHIP	470	5%	1/8W
R307	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-208-812-11	METAL CHIP	18K	2%	1/10W
R352	1-216-105-00	METAL CHIP	220K	5%	1/10W
R353	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R354	1-216-077-00	METAL CHIP	15K	5%	1/10W
R355	1-216-009-00	METAL CHIP	22	5%	1/10W
R361	1-216-049-00	METAL CHIP	1K	5%	1/10W
R362	1-249-389-11	CARBON	4.7	5%	1/4W
R363	1-249-389-11	CARBON	4.7	5%	1/4W
R364	1-216-073-00	METAL CHIP	10K	5%	1/10W
R365	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R403	1-216-077-00	METAL CHIP	15K	5%	1/10W
R404	1-216-081-00	METAL CHIP	22K	5%	1/10W
R405	1-216-109-00	METAL CHIP	330K	5%	1/10W
R406	1-216-190-00	METAL CHIP	470	5%	1/8W
R407	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R501	1-216-097-00	METAL CHIP	100K	5%	1/10W
R505	1-216-049-00	METAL CHIP	1K	5%	1/10W
R506	1-216-109-00	METAL CHIP	330K	5%	1/10W
R507	1-216-198-00	METAL CHIP	1K	5%	1/8W
R508	1-216-206-00	METAL CHIP	2.2K	5%	1/8W
R509	1-216-198-00	METAL CHIP	1K	5%	1/8W
R510	1-216-097-00	METAL CHIP	100K	5%	1/10W
R511	1-216-097-00	METAL CHIP	100K	5%	1/10W
R512	1-216-097-00	METAL CHIP	100K	5%	1/10W
R513	1-216-097-00	METAL CHIP	100K	5%	1/10W
R514	1-216-198-00	METAL CHIP	1K	5%	1/8W
R515	1-216-198-00	METAL CHIP	1K	5%	1/8W
R516	1-216-198-00	METAL CHIP	1K	5%	1/8W
R517	1-216-198-00	METAL CHIP	1K	5%	1/8W
R518	1-216-246-00	METAL CHIP	100K	5%	1/8W
R521	1-216-246-00	METAL CHIP	100K	5%	1/8W
R522	1-216-097-00	METAL CHIP	100K	5%	1/10W
R523	1-216-097-00	METAL CHIP	100K	5%	1/10W
R524	1-216-097-00	METAL CHIP	100K	5%	1/10W
R525	1-216-097-00	METAL CHIP	100K	5%	1/10W
R526	1-216-097-00	METAL CHIP	100K	5%	1/10W
R528	1-216-097-00	METAL CHIP	100K	5%	1/10W
R531	1-216-246-00	METAL CHIP	100K	5%	1/8W
R533	1-216-246-00	METAL CHIP	100K	5%	1/8W
R535	1-208-814-11	METAL CHIP	22K	2%	1/10W (4750RDS)
R535	1-216-097-00	METAL CHIP	100K	5%	1/10W (C450RDS)
R536	1-208-575-51	METAL CHIP	100K	2%	1/8W (4750RDS)
R537	1-216-097-00	METAL CHIP	100K	5%	1/10W (G)
R538	1-216-246-00	METAL CHIP	100K	5%	1/8W (AEP, UK)
R539	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R540	1-216-097-00	METAL CHIP	100K	5%	1/10W
R544	1-216-049-00	METAL CHIP	1K	5%	1/10W
R545	1-216-097-00	METAL CHIP	100K	5%	1/10W
R546	1-216-097-00	METAL CHIP	100K	5%	1/10W
R548	1-216-222-00	METAL CHIP	10K	5%	1/8W
R549	1-216-222-00	METAL CHIP	10K	5%	1/8W
R550	1-216-073-00	METAL CHIP	10K	5%	1/10W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R562	1-216-097-00	METAL CHIP	100K	5%	1/10W
R570	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R571	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R572	1-216-246-00	METAL CHIP	100K	5%	1/8W (4750RDS)
R573	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R574	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R582	1-216-198-00	METAL CHIP	1K	5%	1/8W

Ref. No.	Part No.	Description			Remark
R583	1-216-166-00	METAL CHIP	47	5%	1/8W
R584	1-216-238-00	METAL CHIP	47K	5%	1/8W
R585	1-216-097-00	METAL CHIP	100K	5%	1/10W
R599	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R601	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R602	1-216-097-00	METAL CHIP	100K	5%	1/10W
R603	1-216-089-00	METAL CHIP	47K	5%	1/10W
R604	1-216-089-00	METAL CHIP	47K	5%	1/10W
R606	1-216-206-00	METAL CHIP	2.2K	5%	1/8W
R607	1-216-073-00	METAL CHIP	10K	5%	1/10W
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W
R609	1-216-037-00	METAL CHIP	330	5%	1/10W
R610	1-216-073-00	METAL CHIP	10K	5%	1/10W
R612	1-216-025-00	METAL CHIP	100	5%	1/10W
R613	1-216-025-00	METAL CHIP	100	5%	1/10W
R614	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R615	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R616	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R617	1-216-025-00	METAL CHIP	100	5%	1/10W
R618	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R619	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R620	1-216-025-00	METAL CHIP	100	5%	1/10W
R624	1-249-383-11	CARBON	1.5	5%	1/6W
R625	1-249-383-11	CARBON	1.5	5%	1/6W
R626	1-249-383-11	CARBON	1.5	5%	1/6W
R627	1-249-383-11	CARBON	1.5	5%	1/6W
R660	1-216-198-00	METAL CHIP	1K	5%	1/8W
R661	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R701	1-216-073-00	METAL CHIP	10K	5%	1/10W (4750RDS)
R702	1-216-113-00	METAL CHIP	470K	5%	1/10W (4750RDS)
R704	1-216-246-00	METAL CHIP	100K	5%	1/8W (C450RDS)
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R706	1-216-025-00	METAL CHIP	100	5%	1/10W (C450RDS)
R707	1-216-174-00	METAL CHIP	100	5%	1/8W (C450RDS)
R708	1-216-017-00	METAL CHIP	47	5%	1/10W (C450RDS)
		< VARIABLE RESISTOR >			
RV1	1-241-768-11	RES, ADJ, CARBON 220K			
		< SWITCH >			
S601	1-692-431-21	SWITCH, TACTILE (RESET)			
		< TUNER UNIT >			
TU1	1-693-373-11	TUNER UNIT (FM/AM)			

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X1	1-567-848-11	VIBRATOR, CRYSTAL (7.2MHz)			
X2	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	A-3309-740-A	POWER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C801	1-126-157-11	ELECT	10uF	20%	16V
C802	1-126-157-11	ELECT	10uF	20%	16V
C803	1-126-157-11	ELECT	10uF	20%	16V
C804	1-124-589-11	ELECT	47uF	20%	16V
C805	1-136-165-00	FILM	0.1uF	5%	50V
C806	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C811	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C812	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C821	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C822	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN801	1-778-985-11	PIN, CONNECTOR (ISO)			
CN802	1-778-983-11	CONNECTOR			
CN803	1-778-983-11	CONNECTOR			
		< DIODE >			
D801	8-719-049-38	DIODE 1N5404TU			
D813	8-719-970-02	DIODE ISR139-400			
D814	8-719-970-02	DIODE ISR139-400			
D815	8-719-970-02	DIODE ISR139-400			
D816	8-719-970-02	DIODE ISR139-400			
D823	8-719-970-02	DIODE ISR139-400			
D824	8-719-970-02	DIODE ISR139-400			
D825	8-719-970-02	DIODE ISR139-400			
D826	8-719-970-02	DIODE ISR139-400			
		< IC >			
IC801	8-759-448-48	IC HA13157			
		<CHIP CONDUCTOR >			
JC801	1-216-296-00	CONDUCTOR, CHIP	(3216)		
		< COIL >			
L801	1-416-046-11	COIL, CHOKE			
		< RESISTOR >			
R801	1-216-198-00	METAL CHIP	1K	5%	1/8W
R802	1-216-198-00	METAL CHIP	1K	5%	1/8W

POWER

Ref. No.	Part No.	Description	Remark
R803	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R804	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R811	1-216-296-00	CONDUCTOR, CHIP (3216)	
R812	1-216-296-00	CONDUCTOR, CHIP (3216)	
R813	1-216-296-00	CONDUCTOR, CHIP (3216)	
R814	1-216-296-00	CONDUCTOR, CHIP (3216)	
R821	1-216-296-00	CONDUCTOR, CHIP (3216)	
R822	1-216-296-00	CONDUCTOR, CHIP (3216)	
R823	1-216-296-00	CONDUCTOR, CHIP (3216)	
R824	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< SWITCH >	
S801	1-571-478-11	SWITCH, SLIDE (POWER SELECT)	
**********			
		MISCELLANEOUS	
		**********	
9	1-777-989-11	CORD (WITH CONNECTOR) (AMP REM/TEL MUTE) (C450RDS)	
9	1-777-989-31	CORD (WITH CONNECTOR) (TEL MUTE) (4750RDS)	
16	1-782-092-11	CORD (WITH CONNECTOR) (POWER)	
17	1-728-093-11	CORD (WITH CONNECTOR) (SPEAKER)	
F801	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-067-31	REMOTE COMMANDER (RM-X2S)	
	3-859-481-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C450RDS: AEP/UK)	
	3-859-481-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (C450RDS: AEP)	
	3-859-481-31	MANUAL, INSTRUCTION (GERMAN) (C450RDS: G)	
	3-859-482-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C450RDS: AEP/UK)	
	3-859-482-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (C450RDS: AEP, G)	
	3-859-487-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (4750RDS: AEP/UK)	
	3-859-487-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (4750RDS: AEP)	
	3-859-487-31	MANUAL, INSTRUCTION (GERMAN) (4750RDS: G)	
	3-859-488-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (4750RDS: AEP/UK)	
	3-859-488-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (4750RDS: AEP, G)	
	X-3373-412-1	CASE (PANNEL) ASSY (for FRONT PANEL)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-10	SCREW +B 2X4	
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#3	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-624-104-04	STOP RING 2.0, TYPE -E	
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-916-161-31	FRAME ASSY	
502	X-3370-077-1	SCREW ASSY (AE.KEY), FITTING	
503	3-386-828-01	SCREW, FITTING	
504	3-349-410-01	BUSHING	
505	3-388-078-01	KEY	
506	1-777-989-11	CORD (WITH CONNECTOR) (AMP REM/TEL MUTE) (C450RDS)	
506	1-777-989-31	CORD (WITH CONNECTOR) (TEL MUTE) (4750RDS)	
507	1-782-093-11	CORD (WITH CONNECTOR) (SPEAKER)	
508	1-782-092-11	CORD (WITH CONNECTOR) (POWER)	
509	1-775-543-11	CORD, GROUND (C450RDS)	
510	X-3369-817-1	BRACKET ASSY	
511	1-465-459-21	ADAPTER, ANTENNA	



XR-475ORDS/C45ORDS

SONY

AEP Model
UK Model

SERVICE MANUAL

Ver 1.1 2001.06

SUPPLEMENT-1

File this supplement with the service manual.

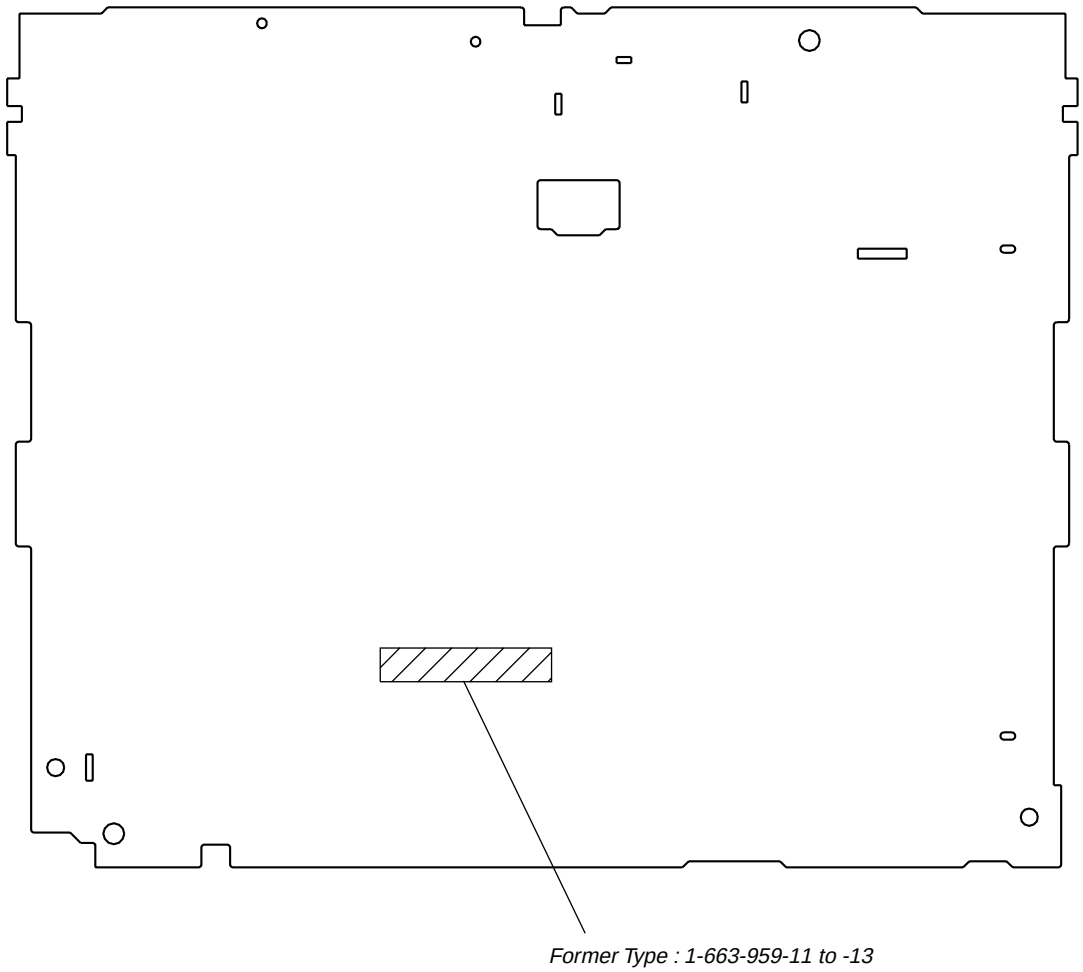
Subject: MAIN Board Modification

(SPM-01012)

In this set, following board has been changed in the midway of production.

1. NEW/FORMER TYPE DISCRIMINATION

– MAIN Board (Component Side) –



Former Type : 1-663-959-11 to -13
New Type : 1-663-959-14

2. DIAGRAMS

2-1. NOTE FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAMS

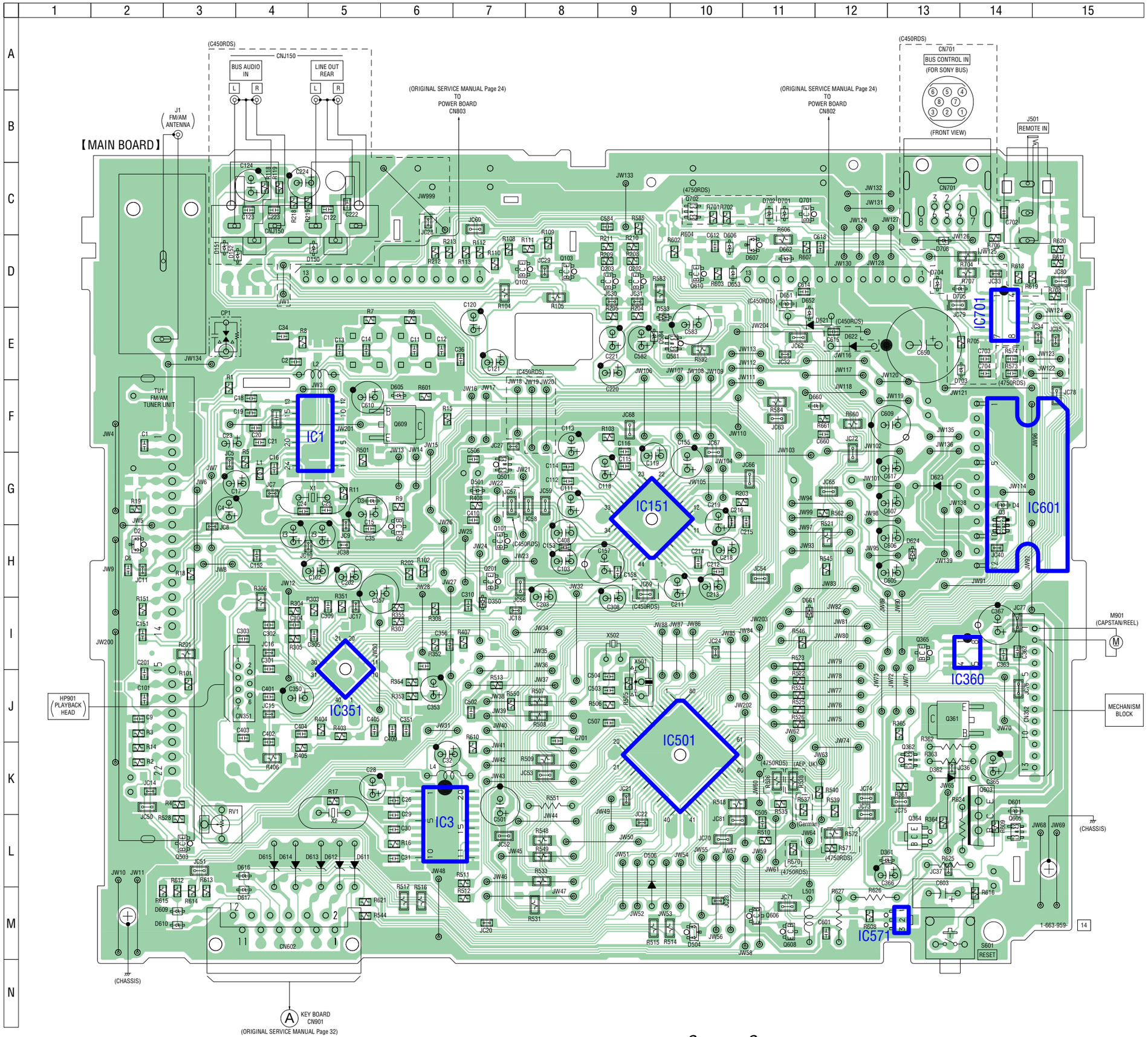
Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▭ : Pattern of the rear side.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW/LW
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : MW/LW
  ⇨ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN

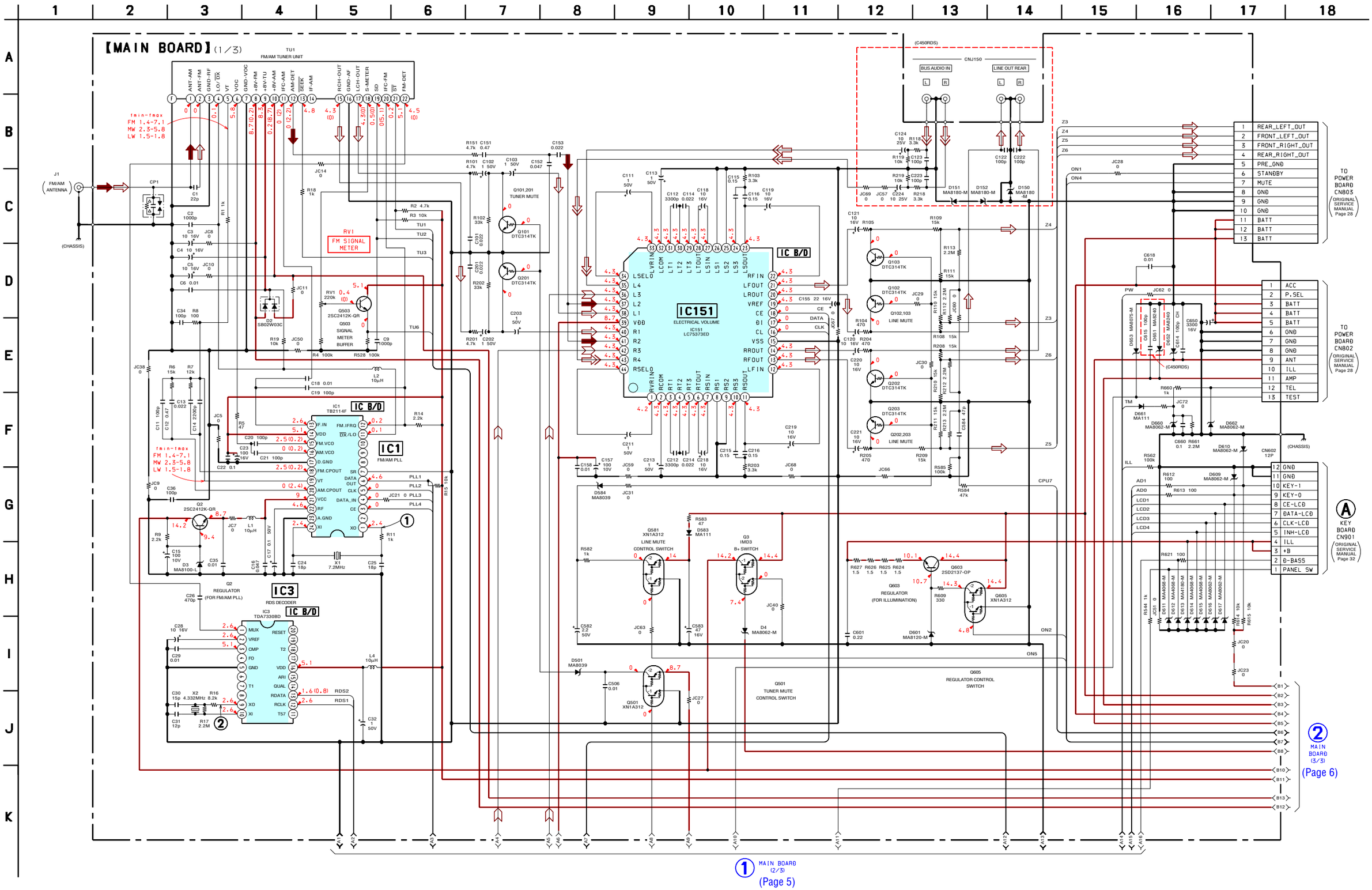
2-2. PRINTED WIRING BOARD – MAIN Board –



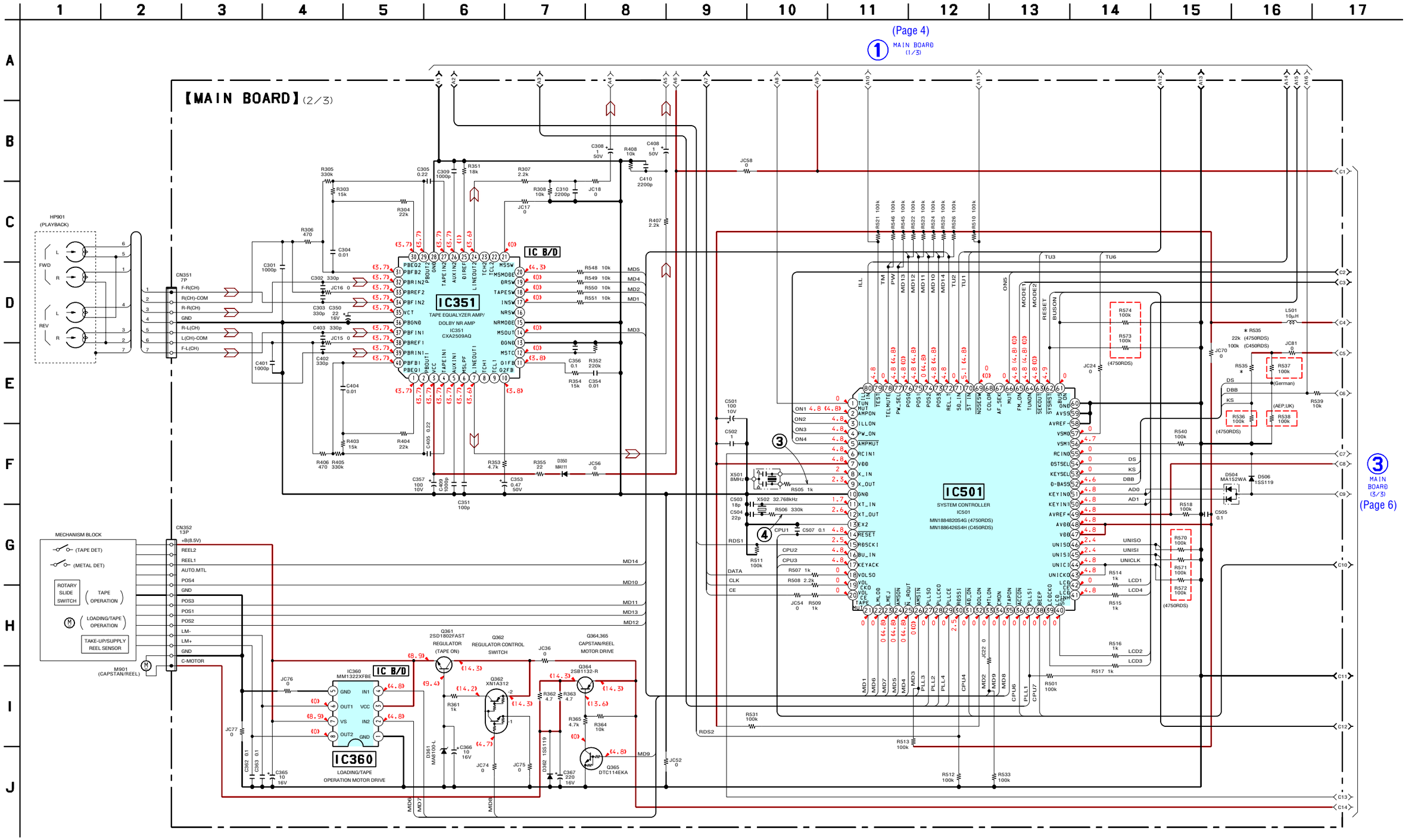
- **Semiconductor Location**

Ref. No.	Location
D2	H-2
D3	G-5
D4	G-14
D150	D-5
D151	D-3
D152	D-4
D350	I-7
D361	L-12
D362	K-13
D501	G-7
D504	M-10
D506	L-9
D583	E-9
D584	E-9
D601	K-14
D605	F-6
D606	D-10
D607	D-11
D609	M-3
D610	M-3
D611	L-5
D612	L-5
D613	L-5
D614	L-4
D615	L-4
D616	L-4
D617	M-4
D621	E-11
D622	E-12
D623	G-13
D624	H-13
D651	D-11
D652	E-11
D653	D-10
D660	F-12
D661	I-11
D662	D-11
D701	C-11
D702	C-11
D703	E-14
D704	D-13
D705	D-13
D706	D-13
IC1	F-5
IC3	L-6
IC151	G-9
IC351	J-5
IC360	I-14
IC501	K-10
IC571	M-13
IC601	G-14
IC701	E-14
Q2	H-6
Q3	G-14
Q101	H-7
Q102	D-7
Q103	D-8
Q201	H-7
Q202	D-9
Q203	D-9
Q361	J-13
Q362	K-13
Q364	L-13
Q365	I-13
Q501	G-7
Q503	L-3
Q581	E-10
Q603	K-14
Q605	L-14
Q606	M-11
Q608	M-11
Q609	F-6
Q610	D-10
Q701	C-11
Q702	C-10

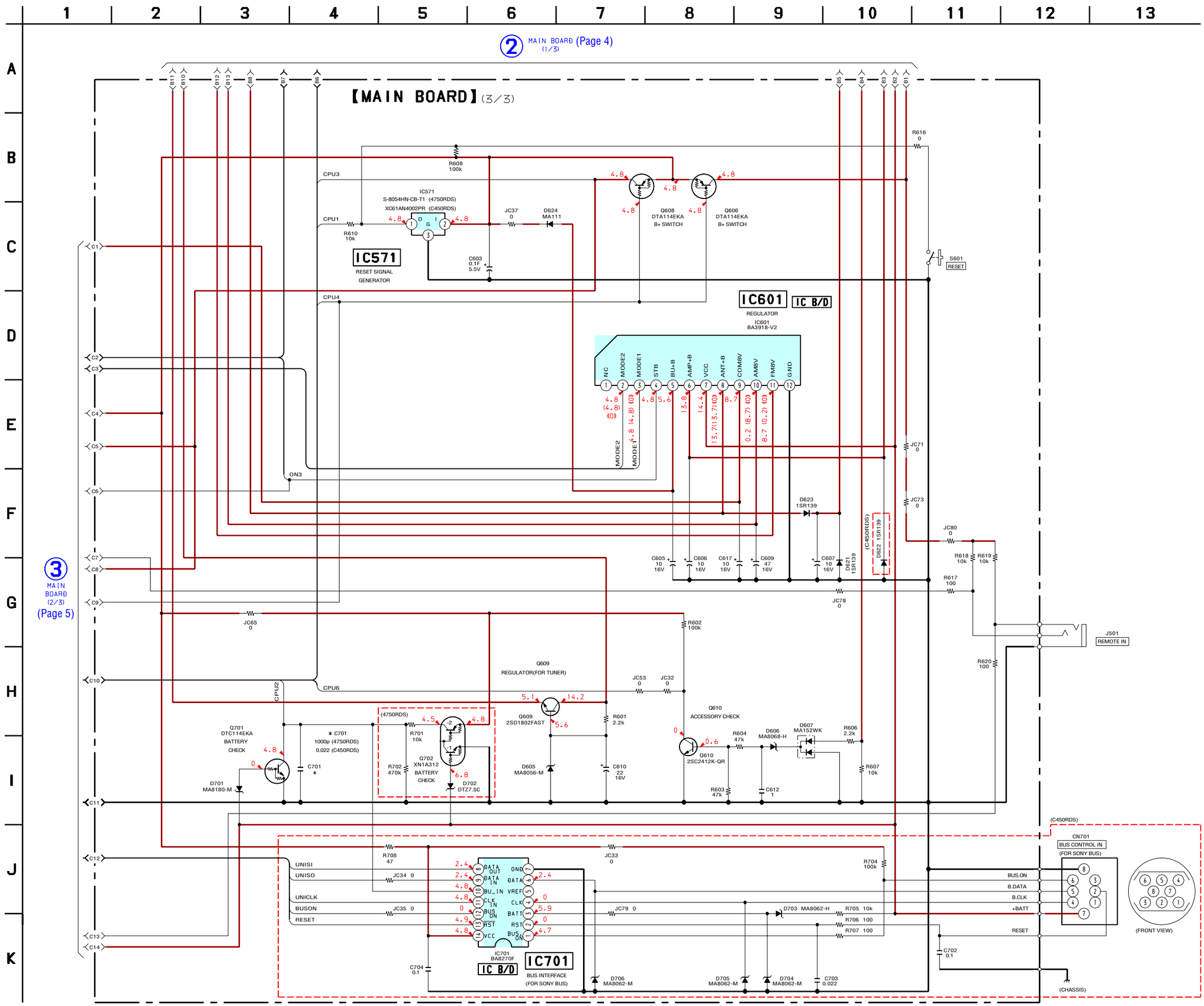
2-3. SCHEMATIC DIAGRAM – MAIN Board (1/3) –



2-4. SCHEMATIC DIAGRAM – MAIN Board (2/3) –



2-5. SCHEMATIC DIAGRAM – MAIN Board (3/3) –



3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3309-739-A	MAIN BOARD, COMPLETE (C450RDS: AEP, UK)			
*	A-3309-743-A	MAIN BOARD, COMPLETE (C450RDS: German)			
*	A-3309-825-A	MAIN BOARD, COMPLETE (4750RDS: AEP, UK)			
*	A-3309-829-A	MAIN BOARD, COMPLETE (4750RDS: German)			
		**********			
*	3-009-293-01	HEAT SINK (C450RDS)			
*	3-009-307-01	BRACKET (IC)			
*	3-010-471-01	HEAT SINK (4750RDS)			
*	3-012-105-01	BRACKET (HS)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-124-233-11	ELECT	10uF	20%	16V
C4	1-124-233-11	ELECT	10uF	20%	16V
C5	1-124-233-11	ELECT	10uF	20%	16V
C6	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C12	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C13	1-163-037-11	CERAMIC CHIP	0.022uF	10%	50V
C14	1-164-161-11	CERAMIC CHIP	2200PF	5%	100V
C15	1-124-584-00	ELECT	100uF	20%	10V
C16	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C17	1-124-463-00	ELECT	0.1uF	20%	50V
C18	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C19	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C20	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C21	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C22	1-163-077-00	CERAMIC CHIP	0.1uF	10%	50V
C23	1-126-933-11	ELECT	100uF	20%	16V
C24	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C25	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C26	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C28	1-124-233-11	ELECT	10uF	20%	16V
C29	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C30	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C31	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C32	1-126-160-11	ELECT	1uF	20%	50V
C34	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C35	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C36	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C101	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C102	1-126-160-11	ELECT	1uF	20%	50V
C103	1-126-160-11	ELECT	1uF	20%	50V
C111	1-126-160-11	ELECT	1uF	20%	50V
C112	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C113	1-126-160-11	ELECT	1uF	20%	50V
C114	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C115	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C116	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C118	1-124-233-11	ELECT	10uF	20%	16V
C119	1-124-233-11	ELECT	10uF	20%	16V
C120	1-124-233-11	ELECT	10uF	20%	16V
C121	1-124-233-11	ELECT	10uF	20%	16V
C122	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C123	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C124	1-126-096-11	ELECT	10uF	20%	35V (C450RDS)
C151	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C152	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C153	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C155	1-124-234-00	ELECT	22uF	20%	16V
C157	1-124-584-00	ELECT	100uF	20%	10V
C158	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C201	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C202	1-126-160-11	ELECT	1uF	20%	50V
C203	1-126-160-11	ELECT	1uF	20%	50V
C211	1-126-160-11	ELECT	1uF	20%	50V
C212	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C213	1-126-160-11	ELECT	1uF	20%	50V
C214	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C215	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C216	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C218	1-124-233-11	ELECT	10uF	20%	16V
C219	1-124-233-11	ELECT	10uF	20%	16V
C220	1-124-233-11	ELECT	10uF	20%	16V
C221	1-124-233-11	ELECT	10uF	20%	16V
C222	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C223	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C224	1-126-096-11	ELECT	10uF	20%	35V (C450RDS)
C301	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C302	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C303	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C304	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C305	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C308	1-126-160-11	ELECT	1uF	20%	50V
C309	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C350	1-124-234-00	ELECT	22uF	20%	16V
C351	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C353	1-124-465-00	ELECT	0.47uF	20%	50V
C354	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C356	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C357	1-124-584-00	ELECT	100uF	20%	10V
C362	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C363	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C365	1-124-233-11	ELECT	10uF	20%	16V
C366	1-124-233-11	ELECT	10uF	20%	16V
C367	1-126-934-11	ELECT	220uF	20%	16V
C401	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C402	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C403	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C404	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C405	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C408	1-126-160-11	ELECT	1uF	20%	50V
C409	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C410	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C501	1-124-584-00	ELECT	100uF	20%	10V
C502	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C503	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C504	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C505	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C506	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C507	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C582	1-124-257-00	ELECT	2.2uF	20%	50V
C583	1-124-589-11	ELECT	47uF	20%	16V
C584	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C601	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C603	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C605	1-124-233-11	ELECT	10uF	20%	16V
C606	1-124-233-11	ELECT	10uF	20%	16V
C607	1-124-233-11	ELECT	10uF	20%	16V
C609	1-124-589-11	ELECT	47uF	20%	16V
C610	1-124-234-00	ELECT	22uF	20%	16V
C612	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C614	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C615	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C450RDS)
C617	1-124-233-11	ELECT	10uF	20%	16V
C618	1-163-021-11	CERAMIC CHIP	0.01uF		50V
C650	1-126-936-11	ELECT	3300uF	20%	16V
C660	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C701	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (4750RDS)
C701	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (C450RDS)
C702	1-165-319-11	CERAMIC CHIP	0.1uF		50V (C450RDS)
C703	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (C450RDS)
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (C450RDS)
		< CONNECTOR/JACK >			
CN351	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN352	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN602	1-764-422-11	PLUG, CONNECTOR 12P			
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			(C450RDS)
CNJ150	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN/LINE OUT REAR)			(C450RDS)
		< DISCHARGE GAP >			
* CP1	1-517-422-11	GAP, DISCHARGE			
		< DIODE >			
D2	8-719-991-65	DIODE	SB02W03C		
D3	8-719-423-07	DIODE	MA8100-L-TX		
D4	8-719-422-64	DIODE	MA8062-M		
D150	8-719-057-80	DIODE	MA8180-M-TX (C450RDS)		
D151	8-719-057-80	DIODE	MA8180-M-TX (C450RDS)		
D152	8-719-057-80	DIODE	MA8180-M-TX (C450RDS)		
D350	8-719-404-49	DIODE	MA111		
D361	8-719-423-07	DIODE	MA8100-L-TX		
D362	8-719-911-19	DIODE	1SS119		
D501	8-719-422-12	DIODE	MA8039		
D504	8-719-400-20	DIODE	MA152WA		
D506	8-719-911-19	DIODE	1SS119		
D583	8-719-404-49	DIODE	MA111		
D584	8-719-422-12	DIODE	MA8039		
D601	8-719-423-32	DIODE	MA8120-M		
D605	8-719-977-03	DIODE	DTZ5.6B		
D606	8-719-017-67	DIODE	MA8068H		
D607	8-719-801-78	DIODE	1SS184		
D609	8-719-422-64	DIODE	MA8062-M		
D610	8-719-422-64	DIODE	MA8062-M		
D611	8-719-109-97	DIODE	RD6.8ES-B2		
D612	8-719-109-97	DIODE	RD6.8ES-B2		
D613	8-719-034-94	DIODE	MA4180-M (QZ)		
D614	8-719-109-97	DIODE	RD6.8ES-B2		
D615	8-719-109-97	DIODE	RD6.8ES-B2		
D616	8-719-422-64	DIODE	MA8062-M		
D617	8-719-422-64	DIODE	MA8062-M		
D621	8-719-970-02	DIODE	1SR139-400		
D622	8-719-970-02	DIODE	1SR139-400 (C450RDS)		
D623	8-719-970-02	DIODE	1SR139-400		
D624	8-719-404-49	DIODE	MA111		
D651	8-719-018-04	DIODE	MA8240-TX (C450RDS)		
D652	8-719-018-04	DIODE	MA8240-TX		
D653	8-719-422-76	DIODE	MA8075-M		
D660	8-719-422-64	DIODE	MA8062-M		
D661	8-719-404-49	DIODE	MA111		
D662	8-719-422-64	DIODE	MA8062-M		
D701	8-719-057-80	DIODE	MA8160-M-TX		
D702	8-719-977-17	DIODE	DTZ7.5C (4750RDS)		
D703	8-719-422-67	DIODE	MA8062-H (C450RDS)		
D704	8-719-422-64	DIODE	MA8062-M (C450RDS)		
D705	8-719-422-64	DIODE	MA8062-M (C450RDS)		

MAIN

Ref. No.	Part No.	Description	Remark
D706	8-719-422-64	DIODE MA8062-M (C450RDS)	
		< IC >	
IC1	8-759-448-88	IC TB2114F (EL)	
IC3	8-759-163-63	IC TDA7330BD-013TR	
IC151	8-759-443-67	IC LC75373ED	
IC351	8-752-079-78	IC CXA2509AQ-T4	
IC360	8-759-395-97	IC MM1322XFBE	
IC501	8-759-451-03	IC MN1884820S4G (4750RDS)	
IC501	8-759-451-04	IC MN1886426S4H (C450RDS)	
IC571	8-759-363-81	IC XC61AN4002PR (C450RDS)	
IC571	8-759-940-45	IC S-8054HN-CB (4750RDS)	
IC601	8-759-347-49	IC BA3918-V2	
IC701	8-759-449-89	IC BA8270F-E2 (C450RDS)	
		< JACK >	
J1	1-764-808-21	JACK (FM/AM ANTENNA)	
J501	1-566-822-41	JACK (REMOTE IN)	
		< CHIP CONDUCTOR >	
JC5	1-216-295-00	CONDUCTOR, CHIP	
JC7	1-216-295-00	CONDUCTOR, CHIP	
JC8	1-216-295-00	CONDUCTOR, CHIP	
JC9	1-216-295-00	CONDUCTOR, CHIP	
JC10	1-216-295-00	CONDUCTOR, CHIP	
JC11	1-216-295-00	CONDUCTOR, CHIP	
JC14	1-216-295-00	CONDUCTOR, CHIP	
JC15	1-216-295-00	CONDUCTOR, CHIP	
JC16	1-216-295-00	CONDUCTOR, CHIP	
JC17	1-216-295-00	CONDUCTOR, CHIP	
JC18	1-216-295-00	CONDUCTOR, CHIP	
JC20	1-216-295-00	CONDUCTOR, CHIP	
JC21	1-216-295-00	CONDUCTOR, CHIP	
JC22	1-216-295-00	CONDUCTOR, CHIP	
JC23	1-216-295-00	CONDUCTOR, CHIP	
JC24	1-216-295-00	CONDUCTOR, CHIP	
JC27	1-216-295-00	CONDUCTOR, CHIP	
JC28	1-216-295-00	CONDUCTOR, CHIP	
JC29	1-216-295-00	CONDUCTOR, CHIP	
JC30	1-216-295-00	CONDUCTOR, CHIP	
JC31	1-216-295-00	CONDUCTOR, CHIP	
JC32	1-216-295-00	CONDUCTOR, CHIP	
JC33	1-216-295-00	CONDUCTOR, CHIP (C450RDS)	
JC34	1-216-295-00	CONDUCTOR, CHIP (C450RDS)	
JC35	1-216-295-00	CONDUCTOR, CHIP (C450RDS)	
JC36	1-216-295-00	CONDUCTOR, CHIP	
JC37	1-216-295-00	CONDUCTOR, CHIP	
JC38	1-216-295-00	CONDUCTOR, CHIP	
JC40	1-216-295-00	CONDUCTOR, CHIP	
JC50	1-216-296-00	CONDUCTOR, CHIP	
JC51	1-216-296-00	CONDUCTOR, CHIP	
JC52	1-216-296-00	CONDUCTOR, CHIP	
JC53	1-216-296-00	CONDUCTOR, CHIP	
JC54	1-216-296-00	CONDUCTOR, CHIP	
JC56	1-216-296-00	CONDUCTOR, CHIP	
JC57	1-216-296-00	CONDUCTOR, CHIP (C450RDS)	
JC58	1-216-296-00	CONDUCTOR, CHIP	
JC59	1-216-296-00	CONDUCTOR, CHIP	
JC60	1-216-296-00	CONDUCTOR, CHIP	
JC62	1-216-296-00	CONDUCTOR, CHIP	
JC63	1-216-296-00	CONDUCTOR, CHIP	
JC65	1-216-296-00	CONDUCTOR, CHIP	
JC66	1-216-296-00	CONDUCTOR, CHIP	
JC67	1-216-296-00	CONDUCTOR, CHIP	
JC68	1-216-296-00	CONDUCTOR, CHIP	
JC69	1-216-296-00	CONDUCTOR, CHIP (C450RDS)	
JC70	1-216-296-00	CONDUCTOR, CHIP	
JC71	1-216-296-00	CONDUCTOR, CHIP	
JC72	1-216-296-00	CONDUCTOR, CHIP	
JC73	1-216-296-00	CONDUCTOR, CHIP	
JC74	1-216-296-00	CONDUCTOR, CHIP	
JC75	1-216-296-00	CONDUCTOR, CHIP	
JC76	1-216-296-00	CONDUCTOR, CHIP	
JC77	1-216-296-00	CONDUCTOR, CHIP	
JC78	1-216-296-00	CONDUCTOR, CHIP	
JC79	1-216-296-00	CONDUCTOR, CHIP (C450RDS)	
JC80	1-216-296-00	CONDUCTOR, CHIP	
JC81	1-216-296-00	CONDUCTOR, CHIP	
		< COIL >	
L1	1-412-006-31	INDUCTOR, CHIP 10uH	
L2	1-410-509-11	INDUCTOR, MICRO 10uH	
L4	1-410-509-11	INDUCTOR, MICRO 10uH	
L501	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q2	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3	8-729-907-28	TRANSISTOR IMD3	
Q101	8-729-920-21	TRANSISTOR DTC314TKH04	
Q102	8-729-920-21	TRANSISTOR DTC314TKH04	
Q103	8-729-920-21	TRANSISTOR DTC314TKH04	
Q201	8-729-920-21	TRANSISTOR DTC314TKH04	
Q202	8-729-920-21	TRANSISTOR DTC314TKH04	
Q203	8-729-920-21	TRANSISTOR DTC314TKH04	
Q361	8-729-015-11	TRANSISTOR 2SD1802FAST-TL	
Q362	8-729-020-67	TRANSISTOR XN1A312-TX	
Q364	8-729-106-60	TRANSISTOR 2SB1115A	
Q365	8-729-900-53	TRANSISTOR DTC114EK	
Q501	8-729-020-67	TRANSISTOR XN1A312-TX	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q581	8-729-020-67	TRANSISTOR XN1A312-TX	
Q603	8-729-423-99	TRANSISTOR 2SD2137-OP	
Q605	8-729-020-67	TRANSISTOR XN1A312-TX	
Q606	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q608	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q609	8-729-015-11	TRANSISTOR 2SD1802FAST-TL	
Q610	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
Q702	8-729-020-67	TRANSISTOR XN1A312-TX (4750RDS)	
		< RESISTOR >	
R1	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R2	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R3	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R4	1-216-097-00	METAL CHIP 100K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R5	1-216-017-00	METAL CHIP	47	5%	1/10W
R6	1-216-077-00	METAL CHIP	15K	5%	1/10W
R7	1-216-075-00	METAL CHIP	12K	5%	1/10W
R8	1-216-025-00	METAL CHIP	100	5%	1/10W
R9	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R11	1-216-049-00	METAL CHIP	1K	5%	1/10W
R14	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R15	1-216-073-00	METAL CHIP	10K	5%	1/10W
R16	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R17	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R18	1-216-049-00	METAL CHIP	1K	5%	1/10W
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W
R101	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R102	1-216-085-00	METAL CHIP	33K	5%	1/10W
R103	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R104	1-216-190-00	METAL CHIP	470	5%	1/8W
R105	1-216-190-00	METAL CHIP	470	5%	1/8W
R108	1-216-077-00	METAL CHIP	15K	5%	1/10W
R109	1-216-077-00	METAL CHIP	15K	5%	1/10W
R110	1-216-077-00	METAL CHIP	15K	5%	1/10W
R111	1-216-077-00	METAL CHIP	15K	5%	1/10W
R112	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R113	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R118	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (C450RDS)
R119	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R151	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R201	1-216-214-00	METAL CHIP	4.7K	5%	1/8W
R202	1-216-085-00	METAL CHIP	33K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-041-00	METAL CHIP	470	5%	1/10W
R205	1-216-041-00	METAL CHIP	470	5%	1/10W
R208	1-216-077-00	METAL CHIP	15K	5%	1/10W
R209	1-216-077-00	METAL CHIP	15K	5%	1/10W
R210	1-216-077-00	METAL CHIP	15K	5%	1/10W
R211	1-216-077-00	METAL CHIP	15K	5%	1/10W
R212	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R213	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R218	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (C450RDS)
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R303	1-216-077-00	METAL CHIP	15K	5%	1/10W
R304	1-216-081-00	METAL CHIP	22K	5%	1/10W
R305	1-216-109-00	METAL CHIP	330K	5%	1/10W
R306	1-216-190-00	METAL CHIP	470	5%	1/8W
R307	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-208-812-11	METAL CHIP	18K	2%	1/10W
R352	1-216-105-00	METAL CHIP	220K	5%	1/10W
R353	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R354	1-216-077-00	METAL CHIP	15K	5%	1/10W
R355	1-216-009-00	METAL CHIP	22	5%	1/10W
R361	1-216-049-00	METAL CHIP	1K	5%	1/10W
R362	1-249-389-11	CARBON	4.7	5%	1/4W
R363	1-249-389-11	CARBON	4.7	5%	1/4W
R364	1-216-073-00	METAL CHIP	10K	5%	1/10W
R365	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R403	1-216-077-00	METAL CHIP	15K	5%	1/10W
R404	1-216-081-00	METAL CHIP	22K	5%	1/10W
R405	1-216-109-00	METAL CHIP	330K	5%	1/10W
R406	1-216-190-00	METAL CHIP	470	5%	1/8W
R407	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R501	1-216-097-00	METAL CHIP	100K	5%	1/10W
R505	1-216-049-00	METAL CHIP	1K	5%	1/10W
R506	1-216-109-00	METAL CHIP	330K	5%	1/10W
R507	1-216-198-00	METAL CHIP	1K	5%	1/8W
R508	1-216-206-00	METAL CHIP	2.2K	5%	1/8W
R509	1-216-198-00	METAL CHIP	1K	5%	1/8W
R510	1-216-097-00	METAL CHIP	100K	5%	1/10W
R511	1-216-097-00	METAL CHIP	100K	5%	1/10W
R512	1-216-097-00	METAL CHIP	100K	5%	1/10W
R513	1-216-097-00	METAL CHIP	100K	5%	1/10W
R514	1-216-198-00	METAL CHIP	1K	5%	1/8W
R515	1-216-198-00	METAL CHIP	1K	5%	1/8W
R516	1-216-198-00	METAL CHIP	1K	5%	1/8W
R517	1-216-198-00	METAL CHIP	1K	5%	1/8W
R518	1-216-246-00	METAL CHIP	100K	5%	1/8W
R521	1-216-246-00	METAL CHIP	100K	5%	1/8W
R522	1-216-097-00	METAL CHIP	100K	5%	1/10W
R523	1-216-097-00	METAL CHIP	100K	5%	1/10W
R524	1-216-097-00	METAL CHIP	100K	5%	1/10W
R525	1-216-097-00	METAL CHIP	100K	5%	1/10W
R526	1-216-097-00	METAL CHIP	100K	5%	1/10W
R528	1-216-097-00	METAL CHIP	100K	5%	1/10W
R531	1-216-246-00	METAL CHIP	100K	5%	1/8W
R533	1-216-246-00	METAL CHIP	100K	5%	1/8W
R535	1-208-814-11	METAL CHIP	22K	2%	1/10W (4750RDS)
R535	1-216-097-00	METAL CHIP	100K	5%	1/10W (C450RDS)
R536	1-216-246-00	METAL CHIP	100K	5%	1/8W (4750RDS)
R537	1-216-097-00	METAL CHIP	100K	5%	1/10W (German)
R538	1-216-246-00	METAL CHIP	100K	5%	1/8W (AEP, UK)
R539	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R540	1-216-097-00	METAL CHIP	100K	5%	1/10W
R544	1-216-049-00	METAL CHIP	1K	5%	1/10W
R545	1-216-097-00	METAL CHIP	100K	5%	1/10W
R546	1-216-097-00	METAL CHIP	100K	5%	1/10W
R548	1-216-222-00	METAL CHIP	10K	5%	1/8W
R549	1-216-222-00	METAL CHIP	10K	5%	1/8W
R550	1-216-073-00	METAL CHIP	10K	5%	1/10W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R562	1-216-097-00	METAL CHIP	100K	5%	1/10W
R570	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R571	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R572	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R573	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)

MAIN

Ref. No.	Part No.	Description			Remark
R574	1-216-097-00	METAL CHIP	100K	5%	1/10W (4750RDS)
R582	1-216-198-00	METAL CHIP	1K	5%	1/8W
R583	1-216-166-00	METAL CHIP	47	5%	1/8W
R584	1-216-238-00	METAL CHIP	47K	5%	1/8W
R585	1-216-097-00	METAL CHIP	100K	5%	1/10W
R601	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R602	1-216-097-00	METAL CHIP	100K	5%	1/10W
R603	1-216-089-00	METAL CHIP	47K	5%	1/10W
R604	1-216-089-00	METAL CHIP	47K	5%	1/10W
R606	1-216-206-00	METAL CHIP	2.2K	5%	1/8W
R607	1-216-073-00	METAL CHIP	10K	5%	1/10W
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W
R609	1-216-037-00	METAL CHIP	330	5%	1/10W
R610	1-216-073-00	METAL CHIP	10K	5%	1/10W
R612	1-216-025-00	METAL CHIP	100	5%	1/10W
R613	1-216-025-00	METAL CHIP	100	5%	1/10W
R614	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R615	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R616	1-216-295-00	CONDUCTOR, CHIP			
R617	1-216-025-00	METAL CHIP	100	5%	1/10W
R618	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R619	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R620	1-216-025-00	METAL CHIP	100	5%	1/10W
R621	1-216-025-00	METAL CHIP	100	5%	1/10W
R624	1-249-383-11	CARBON	1.5	5%	1/6W
R625	1-249-383-11	CARBON	1.5	5%	1/6W
R626	1-249-383-11	CARBON	1.5	5%	1/6W
R627	1-249-383-11	CARBON	1.5	5%	1/6W
R660	1-216-198-00	METAL CHIP	1K	5%	1/8W
R661	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R701	1-216-073-00	METAL CHIP	10K	5%	1/10W (4750RDS)
R702	1-216-113-00	METAL CHIP	470K	5%	1/10W (4750RDS)
R704	1-216-246-00	METAL CHIP	100K	5%	1/8W (C450RDS)
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W (C450RDS)
R706	1-216-025-00	METAL CHIP	100	5%	1/10W (C450RDS)
R707	1-216-174-00	METAL CHIP	100	5%	1/8W (C450RDS)
R708	1-216-017-00	METAL CHIP	47	5%	1/10W (C450RDS)
		< VARIABLE RESISTOR >			
RV1	1-241-768-11	RES, ADJ, CARBON 220K			
		< SWITCH >			
S601	1-692-431-21	SWITCH, TACTILE (RESET)			
		< TUNER UNIT >			
TU1	1-693-373-11	FM/AM TUNER UNIT			
		< VIBRATOR >			
X1	1-567-848-11	VIBRATOR, CRYSTAL (7.2MHz)			
X2	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.06	MAIN board modification (SPM-01012)
1.0	1997.02	New